Archives of Dermatology and Syphilology

VOLUME 2 JULY, 1920 NUMBER 1

LICHEN NITIDUS

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LITERATURE ON LICHEN NITIDUS

Lichen nitidus was first described by Pinkus,[1] in 1901, and in an exhaustive paper on the subject, which he contributed to Neisser's Festschrift, in 1907, the Berlin dermatologist gave a detailed clinical and histologic report of nine cases of the disorder. Since that time, examples have been recorded by Arndt[2] Kyrle and McDonagh,[3] Reines[4] and Bachrach,[5] in England and on the Continent, and by myself[6] in this country. It is probable, as Pinkus has suggested, that the disorder is not nearly so rare as the literature would indicate. Owing to the absence of subjective symptoms, many cases are undoubtedly overlooked.

The disease is characterized by the presence of one or more irregular patches, or collections, of numerous smooth, slightly elevated, rounded, pin-point to pinhead sized, pinkish, flesh-colored papules, some of which are marked by slight central depressions. The mucous membranes are never involved. The presence of the little papules gives rise to no subjective symptoms, and in many instances the discovery of the eruption is accidental. Nearly all of the cases described by Pinkus occurred in males, and in nearly every instance the penis and the lower part of the abdomen were involved. In a few instances, the forearms also were affected.

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2. Arndt, G.: Beiträge zur Kenntnis des Lichen Nitidus, Dermat. Ztschr. **16**:551 and 645, 1909.

3. Kyrle, J., and McDonagh, J. E. R.: Beitrag zur Kenntnis des Lichen Nitidus, Arch. f. Dermat. u. Syph. **95**:45, 1909; Brit. J. Dermat., 1909, p. 339.

4. Reines, S.: Zur Kenntnis eines eigentümlichen Knotchenausschlags (Lichen nitidus Pincus), Med. Klin. **6**:1180, 1910.

6. Sutton, R. L.: Lichen Nitidus, J. Cutan. Dis. **28**:597, 1910.

5. Bachrach: Kasuistischer Beitrag zur Kenntnis des Lichen nitidus, Dermat. Ztschr. **20**:189, 1913.

6. Sutton, R. L.: Lichen nitidus, J. Cutan. Dis. **28**:597, 1910.

Kyrle and McDonagh's patient was a young woman, and the distribution of the eruption was more or less general, the parts principally affected being "the flexor surfaces of the joints, especially wrists and elbows, the axillae and anterior axillary folds, inguinal regions and genitocrural folds, popliteal fossae, and both malleolar regions." In the case reported by Reines, the eruption was confined mostly to the penis and scrotum, and in the one described by Bachrach, to the trunk, the left thigh, and the left hip joint. In my first case, the upper part of the chest, near the anterior axillary folds, the lower abdomen and the forearms were the sites of attack.

PATHOLOGY OF THE DISEASE

The cause of the disease is not known. Kyrle and McDonagh believe it to be tuberculous. Bachrach's patient was tuberculous, but the lichen nitidus lesions did not react to tuberculin. In the cases described by Reines and by me there was no reaction to tuberculin, and attempted animal inoculations met with no success. Arndt has made a careful and exhaustive study of the histopathology, his conclusions being based on the examination of serial sections from 148 lesions. He found a sharply limited, subepithelial infiltration in the most superficial layers of the cutis, the mass structurally resembling that of a tubercle. The epithelial alterations varied somewhat in the different cases, and even in different nodules from the same case. He found the most striking feature of the histology to be the frequent occurrence of giant cells; this naturally suggested a tuberculous etiology, but careful investigation along other lines did not support this view. Tubercle bacilli were absent, and both animal inoculations and tuberculin tests gave negative results. In addition to the giant cells, Arndt found numerous epithelioid cells and mononuclear round cells in the infiltrate. Many of the epithelioid cells were pigmented. The tubercle-like structure was most marked in the older lesions, but in these, unlike true tubercles, there was a fair number of blood vessels. In the recent nodules, there was merely a round-cell infiltration. The epithelium overlying a nodule was sometimes thinned, and more or less parakeratotic. Occasionally, there was a gap between the overlying epithelial bridge and the surface of the dermal infiltration.

DIFFERENTIAL DIAGNOSIS

Clinically, the disorder is to be differentiated from lichen planus, multiple verrucae, folliculitis of the penile skin, lichen scrofulosus, and the lichenoid syphiloderm. Of these affections lichen planus is the closest imitator, and in some instances a histologic examination may be required before a definite conclusion can be reached. In the process of differentiation, Arndt says that the most vital points are

PLATE 1

Plate 1.—Lichen nitidus, showing character and distribution of lesions. (Slightly enlarged.)

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the color, the uniformity of the lesions, the absence of grouping, and the freedom from subjective symptoms.

Recently I had an opportunity to study a well developed case of lichen nitidus in which the color, lack of uniformity and distribution of the lesions all were suggestive of lichen planus.

Fig. 1.—Lichen nitidus, showing typical cellular infiltration; low magnification. (Photomicrograph by Dr. George M. MacKee.)

REPORT OF CASE

History.—The patient was a farmer, aged 27, referred to me by Dr. John C. Ottman of Craig, Mo. The family history was negative for tuberculosis. The case was of eighteen months' duration, and the lesions, which involved the forearms, the backs of the hands, the abdomen, and the anterior surfaces of the thighs, had first been discovered on the dorsal surfaces of the hands. At no time had their presence given rise to subjective symptoms of any kind.

Examination.—On examination, the patient was found to be a well-developed, muscular, rugged young man, with light brown hair and eyes. He was 5 feet and 11 inches tall, and weighed 164 pounds. There was no history of his ever having had a more serious illness than varicella, and a complete physical examination, made by my assistant, Dr. Sherman Mella, showed him to be above the normal in development and condition. The Wassermann test was negative, and there was absolutely no reaction to tuberculin (subcutaneous injection). The most characteristic lesions were to be found irregularly scattered over the flexor surfaces of the forearms. In these localities the slightly elevated, pinkish or reddish, flesh-colored, oval or flat-topped papules were interspersed with areas of normal skin, and exhibited but little tendency to grouping or coalescence. A few were marked by minute, central depressions. At the wrists the little lesions were more closely placed, six or eight, or even more, sometimes occupying a space no larger than the top of a lead pencil. Here the color, also, changed. Instead of being pinkish or yellowish in hue, the papules were reddish or violaceous, and on the lateral and dorsal surfaces of the wrists this variation in color was even more striking. On the backs of the hands, grouping, and even apparent coalescence, had occurred, and in some places the affected skin was almost purple in color. The surface of the lesions, however, was invariably smooth and the skin comparatively soft, the hyperkeratinization so characteristic of long-standing patches of lichen planus being entirely absent. Subjective symptoms likewise were wanting. Over the abdomen and thighs, the lesions were more sparsely distributed, and in these localities they bore a considerable resemblance to those of lichen scrofulosus.

Microscopic Study.—For histologic study, six small pieces of tissue were excised at various points on the forearms and hands. These were fixed, hardened, sectioned and stained for me by Dr. Watson Campbell. The solitary tumors differed but little from those seen in my first case, and those so admirably described by Arndt, and by Kyrle and McDonagh. In the older and apparently more characteristic lesions, pigmentation of the epithelioid cells was somewhat more marked, and giant cells more frequent than in the earlier papules. In sections from one of the earlier lesions, the vascular changes were such as to lead one to suspect that a small capillary was the anatomic structure primarily involved. The minute, ball-shaped mass of small round cells completely surrounded the tiny arteriole, and impressed the observer with the idea that the destruction of the canal, by occlusion of the caliber, would have been a matter of only a short time. In the closely grouped, violaceous lesions on the backs of the hands, no instance of actual coalescence was discovered, although in some of the specimens the little subepidermal growths were so closely placed that three, and in one instance four, occurred in a single low power field. There was no evidence of caseation, and apparently the lesions were in no way connected with the follicles or coil glands.

COMMENT

Owing to the complete failure to react to tuberculin, animal inoculations were not attempted.

The case is of interest because of the comparative rarity of the disorder, the character and distribution of the eruption, and the patient's freedom from demonstrable tuberculous lesions of any kind.

A MELANOTIC TUMOR OF THE LIP TREATED WITH RADIUM

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It has been strongly advised, and by one whom we all rightfully regard as an authority on the use of radium in malignant growths, not to employ either radium or roentgen rays in melanotic tumors.[1] Like all general rules, however, it is subject to exceptions, probably even in the mind of this authority. The following case shows a fortunate outcome in transgressing the rule.

REPORT OF A CASE

History.—Nov. 6, 1918, a physician, aged 37, consulted us in regard to a dark, slate blue, circular spot about 3 mm. in diameter, lying deep in the exposed red part of the lower lip. It was near the cutaneous border in the median line, and had been first noticed perhaps four years before. He thought it had doubled in size in the past two years. It did not clear up on pressure, but became more distinct, and there was a dusky shadow extending out beyond the central dark spot. The lesion was not palpably demonstrable. There were no subjective symptoms, and there was no adenopathy. The entire lip was slightly scaly, and the skin was seborrheic.

The patient's father was subject to moles, and died of an operation following Banti's disease; the mother was still living, enjoyed good health, and was only sixteen years older than her son.

Pigmented spots on the lips must not be regarded for this reason alone as being malignant, but the dark slate color of this one, its steady growth, and its apparent extension by infiltration, as shown by the dusky shadow beyond it, caused us to suspect sarcoma.

Treatment and Course.—A strong radium plaque, the size of a ten-cent piece, and containing 24.23 mgm. of radium element, was screened with 0.40 mm. of lead, four thicknesses of writing paper, and one thickness of rubber tissue, and was retained in place for one hour.

A definite decrease in size was noticed in thirty-six hours, and the color changed from a deep slate blue to gray. A radium reaction set in nine days after the application, when the surface became red, scaly and felt sunburnt. At the same time, there was noticed a tender area with some swelling of a lymph node under the right side of the jaw.

On December 2, the dark spot had decreased to a dot 1 mm. in diameter. Two days before this, a slate colored spot 2 by 1.50 mm. was noticed just within and below the left corner of the mouth. The affection now looked more than ever like a malignant growth.

The same radium plaque with the same screening was applied to the newly discovered lesion for one hour.

1. Wood, Francis C.: Cancer, Nelson Loose-Leaf Medicine, 1919, p. 35.

By December 18, the lesion on the lip was reduced to a dull surface. The reaction over the lesion in the left cheek had begun about a week after the application of the radium, and by this time—in a little over two weeks—the lesion was less prominent and was covered by a gray haze, through which the blue color, which also seemed to be decreasing, could be seen. Another radiation similar to the previous one, but through sixteen thicknesses of paper, was now given. At the same time, two tubes, 25 mgm. each, and screened by one silver tube and 1 mm. of lead, were placed under the left side of the jaw for four hours.

A number of weeks after this radiation, the lesion in the left cheek, which had been receding, began suddenly to enlarge until, on July 1, it was about one-quarter again as large as it had been. Later in July it began to recede. On August 3, another radiation was given to this spot with the same strong plaque, screened by 0.4 mm. of lead and four thicknesses of writing paper. By August 12, the patient said the lesion had disappeared, and when we saw it August 26, there was a faint blue streak in this situation as from a vein glimmering through the mucous membrane; there were two dimples in the surface as from the absorption of tissue. There was, however, no evidence of a tumor either there or in the lip, nor has there been any evidence of recurrence since.

In this case, the alternatives would have been either to allow the affection to pursue its own course, or to perform an extensive and deforming operation. After due consideration, it was determined to employ radium, and fortunately, the case turned out well.

CAUSES OF FAILURE OF RADIUM TREATMENT

The unfavorable reports concerning the use of radium in these growths may arise from two causes. One is the well-known, natural tendency of these tumors to rapid dissemination, which was known long before radium was discovered. In spite of this, any rapid dissemination of the tumors after the application of radium tends to be attributed to radium, which is manifestly unfair.

Another reason for the failure of this treatment may be supplied by the pigment. Cellular pigment is, as is well known, a means of defense against the injurious effects of light, and this is the reason why the skin pigments or tans, on being exposed to light; the pigment increases to protect the cell. The gamma rays of radium are electromagnetic, and are of the same nature, but in much finer wavelets than those of light. The presence of cellular pigment may shield the cell nucleus of the neoplasm from injury by these gamma wavelets, and so diminish their effect as to render them useless in destroying these cells, or may even permit them to act so slightly as to be only a stimulant. The reasonable procedure to combat this would be to so screen the radium employed as to get only the very fine gamma wavelets, which are the most highly penetrative, so that they may step across the pigment line of defense, and attack the cell nucleus just as the neoplastic cell divides, when the nucleus is devoid of a nuclear membrane, and therefore least capable of defense.

FRAMBESIA TROPICA (YAWS)

A STUDY OF THE LITERATURE WITH PERSONAL OBSERVATIONS, A CRITIQUE OF ITS SUPPOSED IDENTITY WITH SYPHILIS, AND A BIBLIOGRAPHY

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DEFINITION

Frambesia tropica is a contagious disease, endemic in the tropics and subtropics, caused by the *Spirochaeta pertenuis* (Castellani) and characterized by both early and late eruptive symptoms somewhat suggestive of syphilis.

Synonyms. — The name frambesia tropica was first applied by Sauvages, 1759, from the raspberry-like appearance of the granuloma. Yaws is a common name, especially in English colonies. Pian is the name given by the French. Bouba or boubas is used in the Spanish colonies. The disease has many local names among different aboriginal peoples. Polypapilloma tropicum was the name given by Charlouis; and the name spirochetose cutanée has been given to differentiate the disease from spirochetose généralisée (syphilis).

HISTORY

The claim has been made that frambesia tropica was known to the ancients. It has also been affirmed that it occupied its place under the generic term "leprosy" of the Bible. Like syphilis, frambesia was "discovered" after the discovery of America by Columbus, and Oviedo described the disease as "boubas" in the West Indies, by which name it is still known there. It is interesting to note that one of the earliest works accredited as proving that syphilis in Europe originated in America is entitled "Tratado llamado Fruto de todos los Santos contra el mal de le ysla Espanola hecho por maestre Rodrigo de Isla ciujano vezino de lisboa para comun e general provecho de los pacientes Enfermos de las semejante Enfermedad que vulgarmente es llamado 'Bubas,'" i. e., "Treatise, Entitled, Fruit of All Saints Against the Disease of the Island Espanola by Master Rodrigo de Isla, Surgeon and Citizen of Lisbon, to the Common and General good of Those Suffering from the Disease in Question, Commonly Called 'Bubas.'"

The theory has been advanced that frambesia tropica had its beginning in Africa, and records of outbreaks on slave ships are avail-

able. The West Indian planters were in the habit of quarantining all fresh arrivals, and most slaves acquired the disease before being allowed to enter the plantation of their owners.

OCCURRENCE

The disease is endemic in the tropics. Recent reports from some sections of Africa give the incidence of the disease as 50 per cent. In Ceylon, the observation has been made that the disease, common enough in the low lands, is rare or even nonexistent in towns 800 feet above sea level. Other sections of the East Indies report cases; Australia, Northern Africa and South America have cases of the disease. Our recently acquired possessions, the Philippines, Guam and Porto Rico, report cases. I saw instances of the disease in Porto Rico and in Panama. Cases have been reported in the United States in travelers, and in returned soldiers and sailors, and several doubtful endogenous cases have been reported in the South. During my service at the New York Skin and Cancer Hospital, but one case resembling yaws was seen among over 15,000 patients. This case was that of a Philippine mess boy, and in the light of experience since acquired, I doubt that this was a case of frambesia.

Age.—No age is spared, but it usually occurs prior to puberty.

Sex.—Frambesia tropica occurs equally in both sexes.

Color.—The black and colored races are more prone to the disease. There are fewer whites in the tropics, and ordinarily they live under a better regimen. Two of my cases occurred in white people, two in negroes and the rest in high mulattoes.

ETIOLOGY

Many organisms had been advanced as the cause of frambesia, but it is generally agreed that the *Spirochaeta pertenuis,* discovered by Castellani in February, 1905, on the island of Ceylon, is the etiologic factor. It is interesting to note that this discovery slightly antedated Schaudinn's demonstration of the *Spirochaeta pallida,* March, 1905 (published May, 1905), and that in another section of the globe—West Africa—Wellmann independently demonstrated a spirochete in frambesia in July, 1905.

Spirochaeta pertenuis, like the organism of syphilis, stains with difficulty, and for a time Castellani named his organism *Spirochaeta pallidula.* The spirochete is extremely delicate, motile, spiral shaped, from a few microns to 18 or 20 in length, and an organism about the size of a red blood corpuscle has eight turns. Some examples of the *Spirochaeta pertenuis* are thicker than others, but Castellani did not

think that too great importance should be given to slight morphologic details. The spirochete of yaws is indistinguishable from the corresponding germ of syphilis; and Schaudinn, to whom Castellani sent samples of this organism, so declared himself. Russell has pointed out six characters that are different.

Spirochaeta pertenuis is constant in the skin lesions of frambesia tropica. The smear should preferably be made from a fresh lesion, not secondarily contaminated. The crust of the lesion is removed, and a sterile platinum loop passed over the moist raspberry granulation, and then smeared over the slide, fixed and stained by Giemsa's stain. The dark field method, or the India Ink (Burri) method may be utilized.

The organism is demonstrable in the spleen, lymphatic glands and bone marrow. The circulating blood is infectious, but the organism

Fig. 1.—Frambesia tropica (yaws); primary or mother yaw—usually extragenital. (From report of commissioner of health, Porto Rico.)

has not been demonstrated. Neither microscopic examination nor animal inoculation has been positive for cerebrospinal fluid.

The organism has been cultivated in vitro and in vivo. The sterile tissue technic of Noguchi is utilized.

CONTAGIOUSNESS

A break in the skin surface is believed, as in syphilis, to be essential for the *S. pertenuis* to gain a foothold on the new host. Such a break in continuity is common enough in the poor of the tropics, who seldom are completely covered with clothes, and who are a constant prey for all kinds of biting insects.

It is probable that *S. pertenuis* may be transmitted through an intermediate carrier, such as flies. Experimentally, flies have successfully transmitted the disease, having first been allowed to rest on open yaw lesions. The *S. pertenuis* has also been recovered from such flies.

COURSE OF THE DISEASE

Incubation Time.—The incubation time is given as from ten days to several weeks. It is difficult to get a history, and none of my patients could give me any data on this.

Initial Lesion.—The initial lesion or "mother yaw" occurs at the site of inoculation. It is nearly always extragenital in location, and only occasionally multiple. The initial lesion may begin as a conical papular elevation, which necroses in the center and becomes incrusted with a moist, papillomatous surface under the crust. Pruritus may be present. The primary lesion of frambesia may resemble the later lesions, and some do not consider it the primary lesion, in the sense that the syphilitic chancre is primary, but that the "mother yaw" is the first lesion of the general eruption. The primary lesion often persists well into the generalized stage.

In many cases it is impossible to get a history of any primary lesion. In one of my cases, that of a woman who had been previously examined, and found free of lesions, a generalized secondary frambesia was the first indication of the infection. She gave no history of an initial lesion.

Generalized Stage.—The lesions of the generalized stage appear from one to three months after the first appearance of the primary yaw. There may be a hundred lesions, more or less. The individual lesions are papular, from the size of a pea to that of a nickel or larger. A furfuraceous eruption has been described as preceding the papular yaw lesion, and even as persisting throughout the attack. I have never observed this. The fullfledged lesion is covered by a yellow dry crust, on removal of which one sees the raspberry-like excrescence typical of the disease, moist and rich in spirochetes. The resemblance to the raspberry is marked, especially in fresh lesions. If untreated, the lesions may persist from two to four months, and unless badly contaminated, they will heal spontaneously.

Special names have been given to frambesia tropica, according to the location and the formation of the lesion. Thus, circinate or ringworm yaws has been described; and yaw lesions of the palms and soles modified by the thickness of the epidermis and the continual traumatism have received special appellations. Castellani has described a peculiar pitted lesion of the palms and soles.

The distribution is habitually on the exposed parts, rarely on the scalp, although I saw one case with multiple scalp lesions. Mucous membranes are ordinarily not affected, but the mucocutaneous junction may be the site of lesions. The genitals are occasionally affected, and I saw the development of a secondary yaw on the foreskin, which

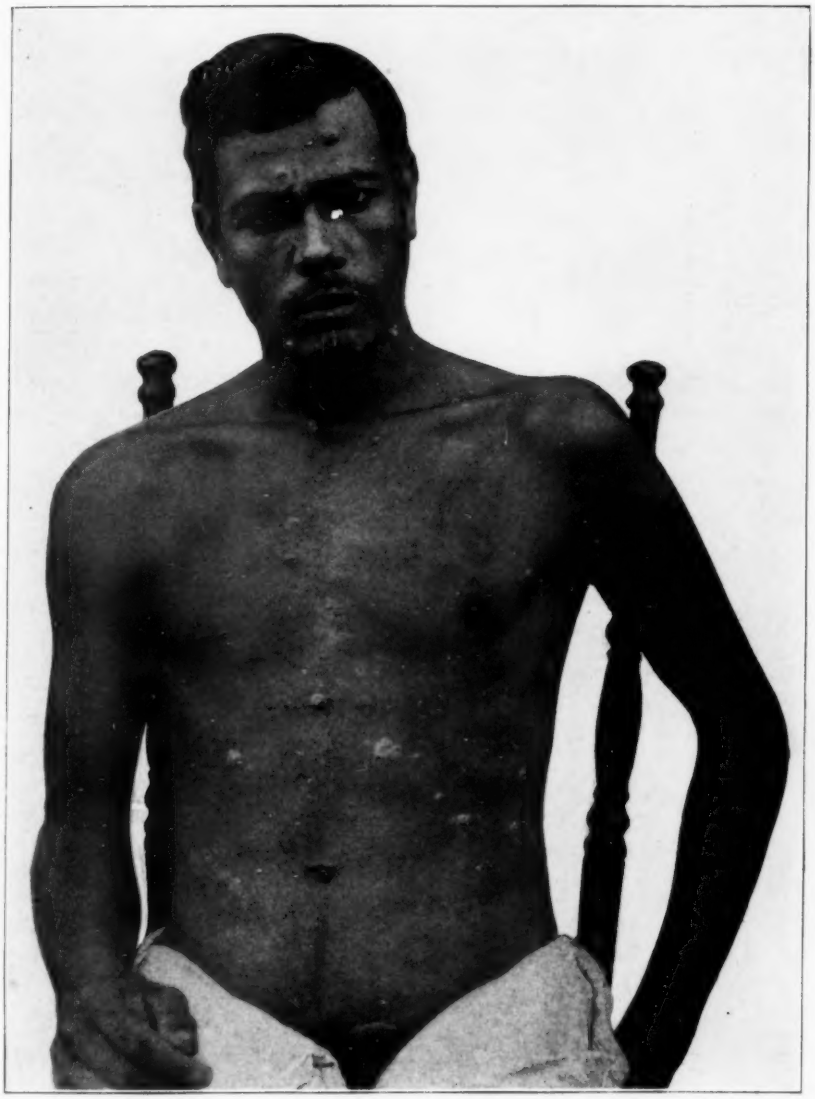

Fig. 2.—Frambesia tropica; primary yaw in pubic hair line; generalized secondary frambesia. (From report of commissioner of health, Porto Rico.)

I was led to believe had been self inoculated. I also saw a sadly neglected case with marked lesions in the axillae and groin. The hair is not affected, and alopecia does not result. The glands are not constantly enlarged. Visceral lesions are rare, but bone and joint lesions were present in 20 per cent. of selected cases, as evidenced by the roentgen ray. The general health is not affected, but many patients have slight fever and rheumatic pains. There may be new crops of lesions, either while former crops are still present or after a period of recession.

The blood picture is unreliable because most patients suffer with a concomitant helminthiasis.

Tertiary Stage.—Tertiary yaws as a distinct phase of frambesia tropica is still questioned. It is said to come within a year of the generalized rash, or to follow without interval; the secondary stage passing directly into the tertiary. One must be extremely cautious not to confuse tertiary yaws with a concomitant tertiary syphilis and the tendency to ulceration of nearly all tropical eruptions should always be considered. Extensive scarring with a history of frambesia tropica should not be taken as evidence of tertiarism. The destructive nasopharyngeal condition known as gangosa has been considered a tertiary yaw lesion. I saw one example in Porto Rico of such an ulceration, but was not able to follow the patient, as he was a temporary prisoner and soon passed to freedom. It would be difficult also to rule out syphilis as the cause of such an ulceration, and on the island of Haiti, I saw numerous extensive nasopharyngeal ulcerations ascribed to syphilis. One author has, unjustly I think, described juxta-articular nodules as tertiary stage frambesia.

NERVE LESIONS

Spirochaeta pertenuis has not been demonstrated in the cerebrospinal fluid either by microscopic examination or by experimental animal inoculation. There is but one reference to the existence of a frambesia-form general paresis, or tabes dorsalis. The observer working among Fijians, who are said to be free from syphilis, admits in his report that the "Fijian is a difficult subject to examine for nervous diseases." Every other observer has commented on the absence of nervous symptoms, and iritis has never been noted.

HEREDITARY TRANSMISSION

Frambesia tropica is not hereditary. Among numerous births in yaws hospitals, no case of an infant born with lesions has been observed. There is a report of frambesia acquired at birth with the

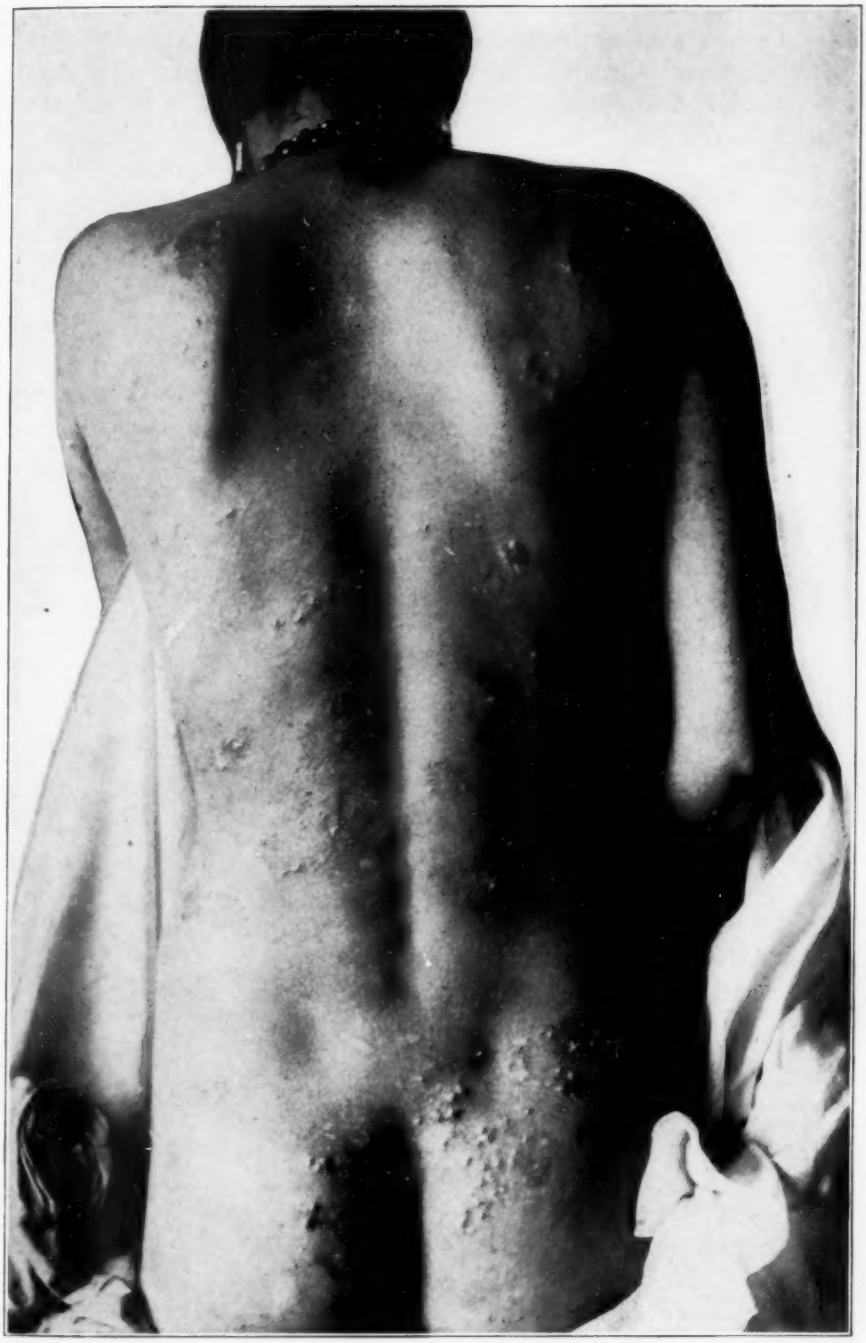

Fig. 3.—Generalized eruption of the second stage of frambesia tropica. (From report of commissioner of health, Porto Rico.)

first lesion appearing at twenty days; and a second report of a child who sustained a scratch on the face immediately after birth in a yaws hospital, which was followed by a typical yaw at the site after thirteen days.

Strange as it may seem, frambesia tropica is a disease more often acquired by the parent from the offspring, than vice versa.

HISTOPATHOLOGY

The skin lesions of the various so-called stages of frambesia tropica present the same histopathologic picture. The following is a summary by Macleod of his studies on yaw material from Ceylon:

I. Changes in the Corium
   1. Blood vessels: dilatation and tortuosity of those in the papillary and subpapillary layers; no thickening of the vessel walls or endothelial proliferation; vessels persist in the granuloma
   2. Cellular infiltration consisting of:
      (a) Plasma cell infiltration at first most marked in the neighborhood of the vessels, follicles, and glands, rapidly becoming diffused; no definite arrangement in rows; no large multinuclear cells; no tendency to organization detected
      (*b*) Marked extravasation of polynuclear leukocytes
   3. Fibrous stroma
      (*a*) Collagen attenuated where the granuloma is densest; no definite degenerative changes
      (*b*) Elastin similarly affected
   4. Hair follicles, sebaceous glands and oil glands seem healthy

II. Changes in the Epidermis
   1. Marked proliferation and down growth of the interpapillary processes so great in the older lesions as to resemble condyloma acuminatum
   2. Basal layer uninterrupted
   3. Edema affecting prickle-cells and interepithelial spaces
   4. Disappearance of pigment in the affected area
   5. Transitional layers imperfect
   6. Cornification marked hyperkeratosis and parakeratosis, with deposition of leukocytes and debris between horny lamellae

Sections from frambesia lesions stained by Levaditi's method discloses the *Spirochaeta pertenuis* in the region of the thickened interpapillary pegs of the epidermis.

POSTMORTEM FINDINGS

The disease is seldom fatal, hence opportunities for investigation are rare. Rake reported four necropsies at a leper asylum. In none of the patients did he find anything resembling the primary lesions of syphilis, nor were there any tertiary symptoms such as deep and obstinate ulceration with destruction of bone or gummas in the subcutaneous tissues or viscera. His fourth subject had a perforating

ulcer, but this was probably due to the leprosy from which he was also suffering. No gummas in the connective tissue, muscle, periosteum or viscera were found.

SEROLOGY

The Wassermann test does not differentiate syphilis and frambesia tropica, because the latter is one of the diseases that gives the so-called paradoxical Wassermann or positive result in the absence of syphilis. Bates of Ancon Hospital, Canal Zone, reports nine cases, five positive, (one partial) and four negative (method not given). Bloombergh, using the original Wassermann test, except for normal guinea-pig heart antigen, found two cases strongly positive. One of the cases

Fig. 4.—Lesion at mucocutaneous angle of secondary stage of frambesia tropica. (From report of commissioner of health, Porto Rico.)

was positive seven days after treatment (dose not mentioned) with arsphenamin. Dr. Gutierrez told me he had records of seven cases not all of which gave a positive Wassermann reaction. I had the Wassermann test performed on seven cases; they were all positive. In one case, a reversal of the Wassermann test occurred after three doses of arsenobenzol (Schamberg) had been given — dosage total, 10 decigrams. This patient, whom I was able to keep under observation for almost a year, remained persistently negative and asymptomatic.

ANIMAL INOCULATION

Monkeys can be successfully inoculated from human cases. The experimental incubation time varies between 16 to 92 days. In the

lower species of monkeys, a local lesion only follows, but the blood is infectious, and injections of blood give rise to other local lesions if further inoculated. Monkeys can also be inoculated from the serum of lesions from monkeys. The orangutang has shown generalized frambesia four months following local inoculation.

Rabbits are also inoculable, and as in syphilis, the testicle and the scrotum have been successfully inoculated.

TREATMENT

The old treatment was tedious and well nigh fruitless. Mercury was without result. Potassium iodid, unless given in large enough doses to produce iodism, did not heal the lesions. Arsphenamin and neoarsphenamin with their modifications—novarsenobenzol, novarsenobillon, arsenobenzol, arsenobillon and kharsivan (B. & W.)—given either intramuscularly or intravenously have revolutionized the therapy. Brochard recommends rectal injection, especially in young children. The results of arsphenamin are evident within from a few days to a fortnight. Most writers seem to consider that the "therapia sterilisans magna" of Ehrlich is feasible in frambesia tropica. Recurrence after single injections have been reported only when small doses were administered. In one series of cases, equal but not equivalent doses of arsphenamin and neoarsphenamin were followed by recurrence only among those receiving the smaller neoarsphenamin dosage.

During the war shortage of arsphenamin, Castellani continued his earlier experiments on a curative mixture, with the following result:

CASTELLANI'S YAWS MIXTURE (MODIFIED)

℞	Tartar emetic	gr. i
	Potassium iodid	ʒ i
	Sodium salicylate	gr. x
	Sodium bicarbonate	gr. xv
	Glycerin	ʒ ii
	Aqua q. s. ad	℥ i

An ounce of the mixture is given three times a day diluted with three or four times the amount of water to adults and children over 14; half doses are given to Europeans and children between 8 to 14. The medication is continued for from ten to fifteen days, remitted for one week, and then give again for from ten to fifteen days.

Tartar emetic intravenously is beneficial but slow.

The local treatment consists of cleanliness, antiseptic solutions or salves, or iodoform.

The prognosis, especially with modern therapy, is good. Complete cures are the rule. The disease is apparently more severe in children, and secondary infection may cause trouble.

Some observers note reinfection following arsphenamin cures. Among aboriginals, it was common to infect all the young children with yaws so that they would not get it later. It has been asserted that this vaccination frambesia was a modified and less virulent form.

Experimentally, frambesia is apparently auto-inoculable, and hetero-inoculable when the rash is still present. One of my patients, referred to above, inoculated himself on the foreskin during the generalized period.

PROPHYLAXIS

The prophylactic measures consist in isolation in special yaws hospitals in infected districts. Each patient should be covered with a mosquito bar to prevent the access of flies to the wounds. There should be compulsory notification of cases in places where health boards are established, and immediate treatment with arsphenamin or its modifications should be instituted.

Fig. 5.—Mother yaw and satellites in intergluteal fold. (From report of commissioner of health, Porto Rico.)

Those who may accidently become contaminated with the secretion from frambesia lesions should use the so-called early treatment, wash with soap and water, and apply a mercurial.

Rarely has the disease been acquired through sexual intercourse. Among over 900 prostitutes, I found but five active cases of frambesia; 12 per cent. of these women presented active lesions of syphilis.

The disease seems to remain in certain houses or schools, and the demolition of these has been practiced.

FRAMBESIA TROPICA AND SYPHILIS

The identity of syphilis and yaws has been affirmed and denied innumerable times. Prior to the discoveries in bacteriology and serology of this century, scientific gentlemen in different parts of the tropical world amassed a huge fund of clinical differentiation. The

accompanying tabulation from Jeanselme and Rist (quoted from Butler's article) gives many of the points that lead most observers to maintain the dual character of these diseases:

COMPARISON BETWEEN SYPHILIS AND FRAMBESIA TROPICA

SYPHILIS	FRAMBESIA TROPICA
1. Disease pandemic	1. Disease tropical
2. Acquired by heredity and contagion	2. Acquired only by contagion
3. Begins by a primary pathognomonic lesion at point of inoculation	3. Initial lesion near portal of entry is not constant nor different from lesions appearing later
4. Immunity conferred by syphilis is in a sense permanent	4. Reinoculation of yaws is possible
5. All attempts at autoinoculation of a patient with secondary or tertiary syphilis are fruitless.	5. The autoinoculation of yaws is possible for an indefinite period, but quite long
6. The hard chancre and other signs of syphilis can appear on a subject who may have yaws	6. Yaws can develop on a subject with syphilis
7. The polymorphism of syphilitic manifestations	7. Monotony of eruption; it showing only papilloma
8. Syphilids, at least those of the tertiary period destroy the skin, and leave after cure, permanent scars	8. Frambesial lesion which is not exposed to any irritation heals without leaving a trace
9. Syphilis is an infection in which the several lesions correspond to three periods, primary, secondary and tertiary	9. All the manifestations of yaws are identical, whatever be their date
10. Syphilitic eruption involves mucous membranes	10. Frambesia lesions do not involve mucous membranes
11. Localizations in the viscera	11. No localization in the viscera
12. Syphilids are not pruriginous	12. Yaw lesions are accompanied by lively itching
13. Alopecia in secondary period	13. No alopecia in the course of the disease

Manson mentions the following points of contrast in the clinical features of the two diseases, all of which are lacking in frambesia tropica: primary sore; infection of fetus; adenitis; exanthem; alopecia; absence of itching; iritis; affection of the permanent teeth; bone and eye affections; congenital lesions; polymorphism of the eruption; nerve lesions and gummas of syphilis. Moreover, both diseases may occur in the same individual.

Macleod on the histologic examination gives this summary which suggests that frambesia tropica and syphilis are different histologic entities.

(*a*) Cellular infiltration. The plasma cells are not so definitely clustered around the vessels in yaws as they are in syphilis, nor do they ever form foci suggesting a tuberculous nodule, as they occasionally do in the latter disease. They are seldom arranged in rows, which frequently occurs in syphilis. Large multinuclear cells (chorioplaques) and true giant cells which may be present in syphilis are absent. No hyaline degeneration, such as may be found in syphilis, is detected in the plasma cells.

Fig. 6.—Ulcerating lesions of secondary stage of frambesia tropica. (From report of commissioner of health, Porto Rico.)

(*b*) Fibrous stroma. The rarefication of the collagen is more marked in yaws than in syphilis; organization is not detected, and colloid degeneration such as occurs in syphilitic gumma, is absent.

(*c*) Blood vessels. There is no tendency to thickening of the vessel wall, or to endothelial proliferation, such as so frequently pertains in syphilis.

(*d*) Epithelium. The proliferation changes in the epidermis in yaws are only equalled in syphilis in the condylomata, while the marked tendency of the

stratum corneum (hyperkeratosis), which is an invariable characteristic in yaws, is unusual in syphilis.

Maul from a roentgen-ray examination of twenty cases notes

That with the exception of 2 per cent. of cases showing as a swelling over the surface of bone, the roentgen-ray picture is different from the bone lesion of syphilis in that:

(1) The periosteal infiltration is absent.

(2) The thickening of the cortex of the bone is absent. Also in the 2 per cent. of cases where thickening of the cortex is present, the thickening remains localized, does not extend along the whole length of the bone, and sooner or later shows rarefication in the center of the bone.

The radiograph can be used as an additional means of differentiating yaws from syphilis, where there is involvement of the bone, and as a confirmation of the evidence that the two diseases are distinct.

Diagnosis by therapeutic agents in the case of mercury may be of slight aid, since mercury has little if any effect on the lesions of frambesia. The results of specific chemotherapy are equally good in syphilis and in yaws, although it is maintained that the latter disease proves more amenable to arsphenamin.

The demonstration, almost simultaneously, of the causative organism in both diseases did not furnish conclusive ground for differentiation. The spirochetes, pallida and pertenuis, are morphologically identical, and biologically very similar. However, the following differences in experimental infection of frambesia tropica compared with syphilis have been noted by Nichols:

Incubation period for testicular lesion is eight days shorter, and for skin lesions it is twenty days shorter (in frambesia).

Lesions of yaws can be cured with smaller doses of salvarsan.

Serum reaction does not appear as promptly.

Syphilitic rabbits treated with salvarsan can be infected with yaws fourteen days after treatment, while reinfections with syphilis do not occur under the same circumstances.

Advances in immunity and immunity reactions have been of some help in maintaining the dual character of these diseases. Patients with syphilis can be inoculated with frambesia, and respond with the lesions of yaws. Patients with yaws may be inoculated with syphilis and pass through typical primary and secondary syphilis. Frambesia is auto-inoculable and hetero-inoculable even in the secondary generalized stage of the disease. Once the syphilitic spirochete has advanced beyond the local site of inoculation, neither auto-inoculation nor hetero-inoculation will succeed.

Serologic diagnosis proved of no aid in the subject, for both diseases excite a reaction in the blood of the patient that gives a Wassermann positive result. Castellani at one time believed that the antigen

bodies in both diseases were different, but the later discoveries of the nonspecificity of antigen in the Wassermann test has made negative any distinction.

That frambesia tropica is not transmitted from the infected parents, no matter in what period of the disease they may be, to the offspring

Fig. 7.—Lesions of the soles, locally called "clavos." (From report of commissioner of health, Porto Rico.)

during the intra-uterine existence of the fetus is a strong argument in favor of nonidentity. Hereditary syphilitics do not acquire syphilis, yet I have seen a case of generalized frambesia in a typical hereditary syphilitic boy, who had the typical Hutchinson triad, notched spade upper incisors, marked iritis and deafness.

The mother of an hereditary syphilitic child does not acquire syphilis from her offspring, but it is a common observation that an infant with yaws infects its mother. The location of the primary yaw on the nipple, and over the ilium, where the native mother carries her baby, is evidence of this.

My own clinical observations in the tropics, where I was in the position to observe all the skin diseases among upward of 20,000 native men and women for fourteen months, do not incline me to the theory that frambesia tropica is a modified form of syphilis. The syphilitic eruptions I have seen among these people were in no way different from the same type of eruption encountered in the temperate climes. Contrariwise, the clinical appearance of the frambesia cases appealed to me as having an individuality not imitated by the generalized syphilitic eruptions. The bright red moist granuloma underneath the dry yellow crust should distinguish this affection.

For the presentation of the characteristics these diseases have in common, I refer the reader to Captain Butler's [1] paper, "Some Facts and Fancies Regarding the Unity of Yaws and Syphilis."

SPECULATION

The theory that frambesia tropica is a form of syphilis changed by climatic conditions and by centuries of passage through the colored race has been advanced. The possibility of the transmutation of the spirochete may be reserved. Certainly, our present knowledge on transmutation of bacteria is too meager to warrant its discussion.

SUMMARY

Frambesia tropica exists in our nearby southern neighbors, Porto Rico and Panama, with whom we are having an ever increasing commercial and social relationship. As it exists in these places, where I had the opportunity to study ten examples of the disease, it corresponds to the descriptions given under various other names in other parts of the tropics and subtropics. I demonstrated the *Spirochaeta pertenuis* and I corroborate the finding that this organism is morphologically indistinguishable from *S. pallida*. The serology was investigated and all the cases gave positive Wassermann reactions. Five cases were diagnosed among upward of 900 prostitutes.

I could not make the diagnosis of tertiary yaws, on the presence of ulceration or scarring. One case was in an hereditary syphilitic child presenting a full fledged frambesia eruption, and the Hutchinson triad.

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1. Butler: Some Facts and Fancies Regarding the Unity of Yaws and Syphilis, U. S. Naval Med. Bull. **8**:561, 1914.

Treatment with arsenobenzol (Schamberg) and novarsenobillon in my hands has given the beneficial results described by others.

Fig. 8.—Ulcerating lesions with loss of substance followed by scarring. (From report of commissioner of health, Porto Rico.)

Personally, I am inclined to the belief in the dual character of frambesia tropica, and syphilis on clinical grounds alone. The extensive evidence accumulated is confirmatory to nonidentity.

Thanks are extended to the gentlemen of the laboratory of the Institute of Tropical Medicine and Hygiene, San Juan, Porto Rico; of the Department of

Health, Porto Rico; and to the Santo Tomas Hospital, Panama, R. P., for aid in the technical studies.

My own photographs, taken with a kodak, were not clear enough for reproduction, and I especially thank Dr. J. Lugo Viña, Secretary, Board of Health, Porto Rico, for his kindness in supplying me with the photographs taken by his department of cases of a recent epidemic.

15 Central Park West.

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XIII.—MULTIPLE BENIGN CYSTIC EPITHELIOMA ASSOCIATED WITH XERODERMA PIGMENTOSUM *

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ST. LOUIS

In reviewing the extensive literature dealing with these diseases, one is impressed with its complexity, the confusion of terms and the diversity of types of lesions. There are four points of similarity between the two conditions: (1) the hereditary tendency; (2) the unknown etiology; (3) the age incidence, and (4) the appearance of lesions, chiefly on the exposed parts of the body, consisting of atrophic cutaneous changes, pigmentation and multiple carcinomatosis.

Benign cystic epithelioma (Brooke) may be defined as a circumscribed cutaneous atrophy and relatively benign carcinomatosis of unknown etiology and definite hereditary tendency, occurring in early life on the exposed portions of the skin, notably the face and hands, characterized by the formation from tiny pigmented papules, or of firm, raised, semitranslucent, pinkish, tubercular or nodular, flattened masses that show no tendency toward involution.

Brooke,[1] in 1892, separated this condition from other adenoid skin epitheliomas and his observations have been confirmed by Fordyce,[2] Unna, Stelwagon and others. Adamson,[3] in 1908, attempted to point out the differences between this condition and multiple rodent ulcer, which "led to the query that has not been answered, 'as to what is the essential difference between a benign and a malignant epitheliomatous growth.'"

Xeroderma pigmentosum (Kaposi) is, by definition, a disease of low malignancy and unknown etiology, developing in early life and tending to occur in many members of the same family. The chief characteristics are: precociously senile cutaneous changes, pigmentation and carcinomatous metamorphosis affecting exposed portions of the skin.

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* Studies, reports and observations from the Dermatological Departments of the Barnard Free Skin and Cancer Hospital and the School of Medicine, Washington University, St. Louis, Mo., U. S. A., service of Drs. M. F. Engman and W. H. Mook.

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Hebra and Kaposi [4] first described the condition as a clinical entity in 1870, and Kaposi gave detailed histories and pathologic findings in 1882. Since that time over 200 cases have been reported, more than eighty of which have been studied thoroughly with almost as many

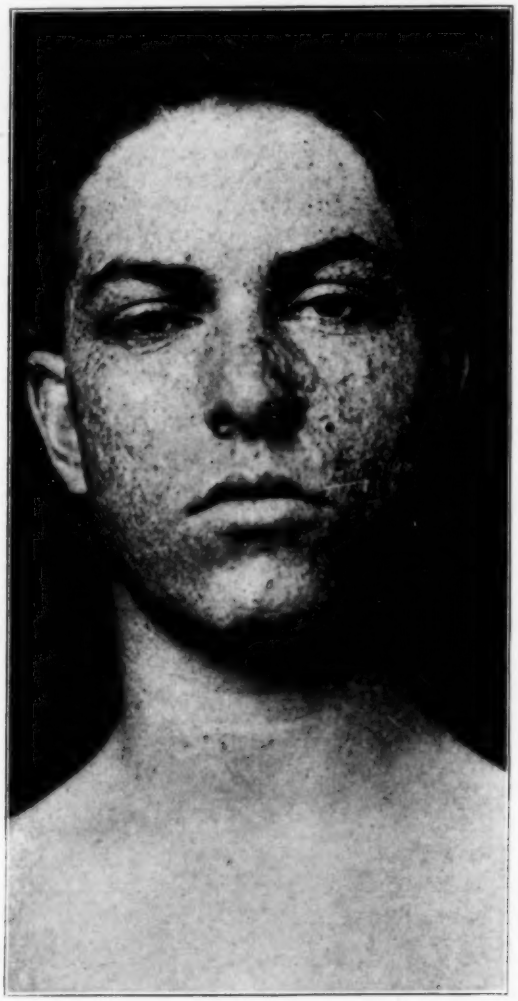

Fig. 1.—May, 1919. Showing distribution of lesions, scarring from previous treatment and tumors, the smaller ones deeply pigmented, some pearly, vesicle-like, others ulcerated, crusted. On the right cheek just anterior to the ear can be seen the suture line of the second biopsy.

theories as to etiology and mode of origin — but these reports seem to have added little to the knowledge of the subject.

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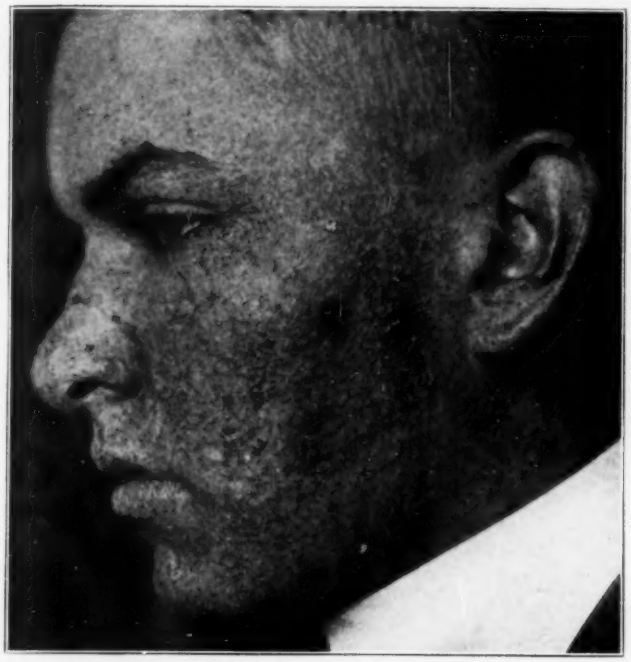

Fig. 2.—Aug. 3, 1919. Note small pigmented areas and tumors of ear.

Fig. 3.—Aug. 3, 1919. Note small pigmented areas and tumors of the ear, also single, deeply pigmented growth near outer angle of right eye.

The histopathology, as reported by Kaposi, Taylor,[5] Unna, Pollitzer,[6] Councilman,[7] McGrath [7] and Stelwagon shows many associated conditions, such as sarcoma, myxoma, angioma and granuloma — but the predominating feature is epithelioma, which may be of the prickle or of the basal cell type (Kreibach, Pernet, Halle [8]). They are often pigmented, as in sailor's carcinoma (Unna).

Xeroderma pigmentosum has been divided into two distinct clinical types — the early malignant condition which results in death before adult life, and the delayed or late dermal atrophy associated with benign carcinomas.

Fig. 4.—Low power. Biopsy No. 1, January, 1919. A nodule recurrent at the border of a scar left by previous caustic treatment. This section shows embryonal epithelial cells arranged in cords, masses and alveoli enclosing homogeneous eosin staining material, surrounded by a subdermal layer of scar tissue below a thinned epithelium.

The case we report is one of undisputed xeroderma pigmentosum, clinically, which is associated with a frank and characteristic multiple benign cystic epithelioma. It does not fall, then, into either the

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juvenile malignant or late benign class, and is, therefore, unique in that it has been present from the patient's earliest recollection and has not become malignant. This patient may be in a transition stage between the two fairly distinct types.

REPORT OF A CASE

Family History.—L. S., aged 18, a young white man, American born of German parents, had a negative family history for similar conditions, save that the mother died of "cancer" at the age of 45 and the brother "freckled" easily. The freckles were removed by some local application at an early age and have not returned. The parents, brother and sister are of a pronounced brunette type.

Fig. 5.—Low power section of small, deeply pigmented lesion just anterior to right ear. Biopsy No. 2. This section shows elevation of tumor from surrounding fairly normal skin. Direct connection of the basal layer of the epithelium with the masses of similar cells situated in the dermis is shown as well as finger-like projections also from the basal layer. Four definite, cystic structures are seen, with lining membrane surrounding homogeneous colloid-like material into which projects a bud of massed basal epithelial cells arranged about a scanty stroma connected with the dermis. The lining membrane of each cyst is reflected about the papillomatous structure except at its pedicle.

Past History.—The patient was born and reared in the city The only serious illness was measles, without complications, at the age of 8 years.

Present Illness.—The patient stated that as far back as he could remember, his face, neck and hands had been covered with "black freckles," as well as a few on the ears. Because freckling occurred so readily when exposed to sunlight, he was kept in the house and later chose indoor work. For the last few years he has been employed at night. When 14 years old he noticed "a small, hard, lumpy" tumor on the left side of the nose which grew to the size

of a pea and was removed with "the electric needle." At this time similar shiny tumors appeared on the cheeks, nose, forehead and eyelids, eighteen of which were treated with "acid," causing the disappearance of a few, but most of them recurred in the scar. More continued to appear. Many local applications of salve were made, but with no benefit. The patient refused roentgen-ray treatment. Since the age of 15 there had been successive crops of small tumors developing over the face, chiefly in spring and summer. Some of these had undergone ulceration, and many had completely disappeared under treatment with caustics, excision and thermocautery. Biopsies were made in January and May, 1919.

Physical Examination.—The patient was a well developed, well nourished young man with no gross abnormality. The hair was reddish-brown; the eyes were brown; and the skin on the exposed portions of the body had a swarthy

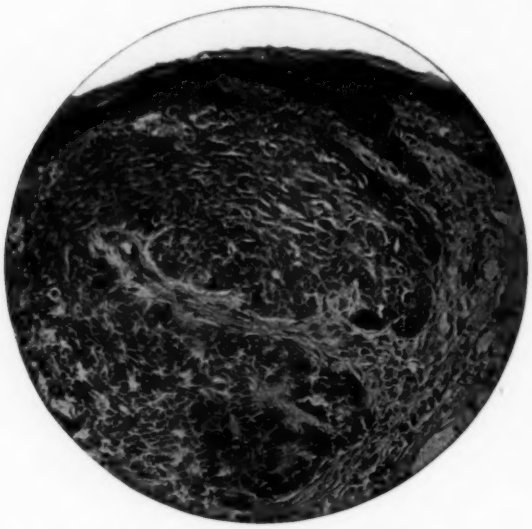

Fig. 6.—This high power section from Figure 5 shows the direct connection between the epithelium and the mass of epithelial cells below. The cells are not infiltrating, but invading behind a basement membrane, and the rapid proliferation is shown by the two mitotic figures. The small amount of stroma is made up of young connective tissue and thin walled vessels about which there is a moderate small round-cell infiltration.

appearance. Over the forehead, face, ears and neck, extending below the clavicle anteriorly and to the seventh cervical vertebral spine posteriorly were many lentiginous spots varying in size from 1 to 4 mm. Similar spots appeared on the dorsum of the hands. There were many white, irregular scarred areas on the face up to 1 cm. in diameter, some of which were covered with a fine scale. The skin of these areas, particularly of the face, was rugose, dry, thickened and somewhat immobile. Intermingled with these scars were numerous tiny tumors from 0.5 to 10 mm. in diameter, scattered irregularly over the face. Some of the larger ones were ulcerated in crater form, covered with dry, hemorrhagic crusts, and had pinkish, pearly, raised margins; others were dull red in color, semitranslucent, almost vesicular in appearance and

raised from 1 to 3 mm. The surface was glistening and about the periphery could be seen many tiny dilated venules. The smaller tumors, from 1 to 3 mm. in diameter, were dark-brown to black in color and were raised a little above the surrounding skin. Pressure on a tumor produced a dull pain. Fluid was not expressed on pricking the skin. The condition of the teeth was poor; there was a decayed upper molar. There were no palpable glands in the neck. The remainder of the physical examination was negative. Blood pressure averaged about: systolic, 120; diastolic, 80.

Blood examinations from time to time averaged: Red blood cells, 5,472,000; white blood cells, 8,200; hemoglobin, 85 per cent. Differential, 500 cells: neutrophils, 53 per cent.; basophils, none; eosinophils, 1 per cent.; small lymphocytes, 42 per cent.; mononuclears and transitionals, 4 per cent. No abnormal cells were seen at any time.

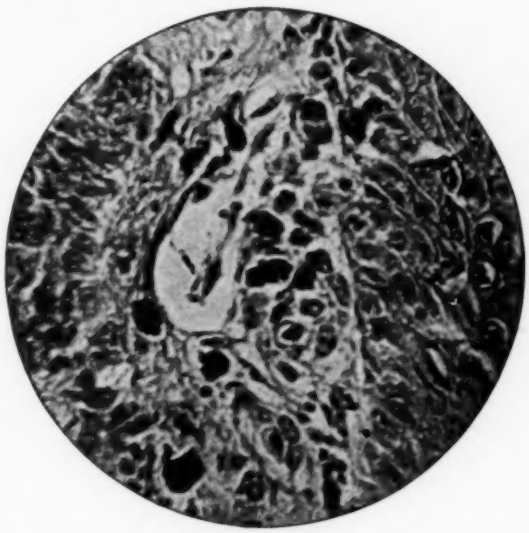

Fig. 7.—A higher magnification of an area of Figure 5 to show the occurrence of irregular masses of dark-brown pigment within the stroma of islands of epithelial cells. These pigment deposits are found in the neighborhood of large thin-walled vessels.

This case then presents the following characteristics of xeroderma pigmentosum: It began in early life and became progressively more pronounced. It now presents clinically: scarring, hyperkeratosis, telangiectases, brown and black pigmentation, and epitheliomas on exposed portions of the skin. The blood shows an oligocythemia and relative lymphocytosis with slightly diminished hemoglobin, as found by Okamura.

Histology.—Histologically there occurs an acanthosis and parakeratosis intermingled with a thickening of the corium and thinning of the epidermis. The corium shows a fairly marked, small round cell infiltration, and an increased proliferation of blood vessels around which there are large masses of dark pigment.

Pathology.—The pathologic picture is that of multiple epitheliomas. The masses of cells show numerous direct connections with the basal layer of the epidermis and are supported by scanty stroma. The individual cells are of the

embryonic basal type, rapidly proliferating with many mitotic figures, but showing no tendency to break through the basement membrane. The many tiny cysts have projecting into them intercystic papillomatous masses of epithelial cells from which the limiting membrane is reflected to form the lining of the cavity which is partly filled with homogeneous colloidal material. The histopathology, therefore, is that of multiple benign cystic epithelioma associated with xeroderma pigmentosum.

Treatment.—The only treatment given this patient aside from excision of tumors for biopsy was the application of a radium plaque to fourteen of the larger lesions. This caused them to disappear in three or four weeks, leaving smooth pink scars. We were unable to keep the patient under observation as he insisted on leaving the city.[9]

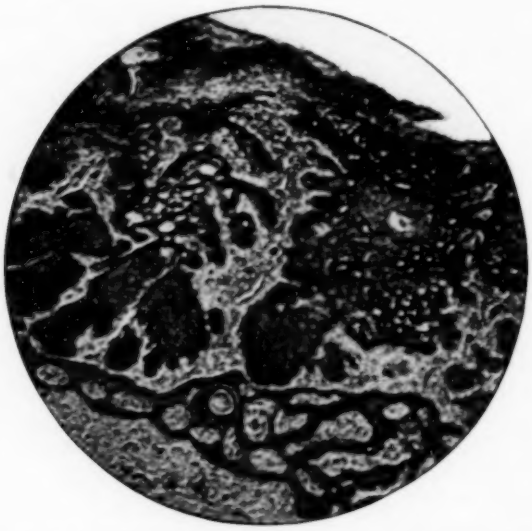

Fig. 8.—Also high power of Figure 5. An area at the surface overlying down growths of epithelial cells, showing degeneration with the formation of vacuoles and tiny vesicles. Some cells have undergone dissolution. The area is edematous and there is marked round-cell infiltration throughout.

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9. In addition to the references given, the following will be found of interest:

Anderson, T., and McCall, A.: Case of Xeroderma Pigmentosum with Post-mortem Examination, Brit. J. Dermat. **4**:371, 1892.

Crocker: A Case of Lymphangioma Tuberosum Multiplex, London Clin. Soc. Trans. **32**:151.

Falcao: J. Cutan. Dis. **15**:173, 1897.

Little, C. G. Graham: A Note on Two Cases of Epithelioma Adenoides Cysticum (Brooke), Brit. J. Dermat. **26**:173, 1914.

White, J. C.: Multiple Benign Cystic Epitheliomata, J. Cutan. Dis. **12**:477, 1894; Ibid. **25**:50 (Feb.) 1907.

ONYCHAUXIS DUE TO HYPOPITUITARISM

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PITTSBURGH

In burdening the literature with this case report, I find my justification in the complex picture presented by this patient.

REPORT OF CASE

The patient, R. D., was referred to me by Dr. J. W. Boyce on account of the peculiar formation of his fingernails. This formation had existed practically since his birth, with constantly progressive changes. The nails appeared to show a hypertrophy in breadth and thickness, and were changed in color, texture and density.

All nails were involved, though the process originally started on the nails of the great toes, and gradually involved all of the toes and fingers. The most marked changes were noticed in the nails of the great toes; these were much thicker than normal, and the upper surface was grooved by the uneven piling up of nail substance, giving them a transversely striated appearance. The grooves could be distinctly felt and gave the nails a rough feel. The nails were lusterless and were brown, dark brown or black; the older the involvement the darker the color of the nail.

Family History.—The father and mother were alive and well. The patient was the youngest of four children. The other two were 24 and 22 years, respectively, and one was stillborn twenty years ago. There was no conception after this stillbirth, until the birth of the patient, who was 9 years old. There was no conception after his birth. The patients' mother's aunt died of pulmonary tuberculosis. There was no family history of syphilis or heart disease.

Personal History.—The patient was of normal delivery, breast fed. Dentition began at 6 months. He began to talk at 12 months and began to walk at the age of 13 months. He had had measles and German measles. When I saw him he was 9 years old, and was in the third grade of the public school and getting along fairly well in his studies. For the last six years he had been suffering from a dry cough which was brought on particularly by exercise. No medication appeared to affect it, nor were any seasonal differences noted. The cough did not seem to incapacitate him or in any measure to interfere with his welfare. He had frequent attacks of ulcers on the tongue and the buccal mucous membranes. These ulcers, which were bright red, slowly turned to grayish white and disappeared spontaneously. This condition also was of about six years' duration.

The patient had an abnormal appetite and ate ravenously and frequently; as his mother expressed it, he "could eat all the time." He had frequent attacks of nausea followed by vomiting; these always occurred at night and were followed by severe headache of a migraine type. The color of the vomitus was usually dark brown. These attacks were of three year's duration and were progressively becoming more frequent. He complained of difficulty in vision at times, with considerable blurring of letters. He was also troubled with occasional "spells." He went into a subconscious state from which he was roused with difficulty (petit mal). I observed one of these, and it was typically epileptiform.

Physical Examination.—The patient was a well built boy of larger height than the average, light complexion, well nourished and active and intelligent. He weighed 33 kilograms.

The head was normally formed; the hair was blonde and dry; the eyebrows were highly arched and scanty in growth. Pupillary reaction was normal. The

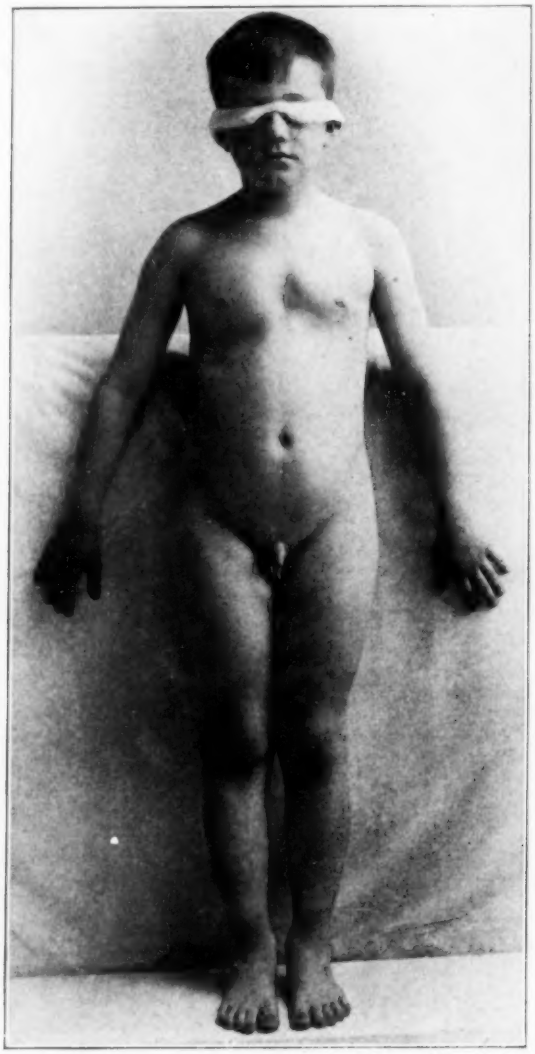

Fig. 1.—Breast structure, broad pelvis and small genitalia.

palate was highly arched. The teeth showed a slight edging and many were decayed. The tonsils were greatly hypertrophied and the follicles were filled with debris. A fairly pronounced formation of breast structure with a good deal of erectile tissue in the nipples gave the chest a feminine appearance. There was a distinct tenderness in the left lumbar region.

The pelvis was broad and feminine in appearance; mons veneris was pronounced. The measurements of the pelvis were: External conjugate diameter, 12.5 cm.; interspinous conjugate diameter, 16.0 cm.; intercrestus conjugate diameter, 19.0 cm.; left external oblique diameter, 15.0 cm.; right external oblique diameter, 15.0 cm., and bitrochanterie diameter, 23.5 cm. The reflexes—

Fig. 2.—Marked feminine hips and genu valum.

patellar and biceps—were almost entirely absent. Genu valgum was quite noticeable.

Special Examinations.—Eye Examination: Vision, right eye, 16/40; left eye, 16/40. Mydriasis was produced by homatropin. The media were clear. Fundi: Partial (beginning) optic. There was atrophy in both eyes. Visual Fields:

There was slight contraction for white in the right eye and marked contraction up and in the left eye.

Roentgen-Ray Examination: Chest examination was negative (for enlarged thymus). The skull showed a small sella turcica; the anterior and posterior clinoid processes were very thick. The luetin skin test and the von Pirquet tuberculin skin test were negative.

Urinalysis: April 13, 1920: Color, amber; reaction, acid; specific gravity, 1.030; albumin, negative; sugar, negative; indican + +; microscopic, phosphates, amorphous mucous leukocytes.

April 15, 1920: Color, amber; reaction, acid; specific gravity, 1.030; albumin, negative; sugar, negative; indican, + +; microscopic, phosphates, amorphous mucous leukocytes.

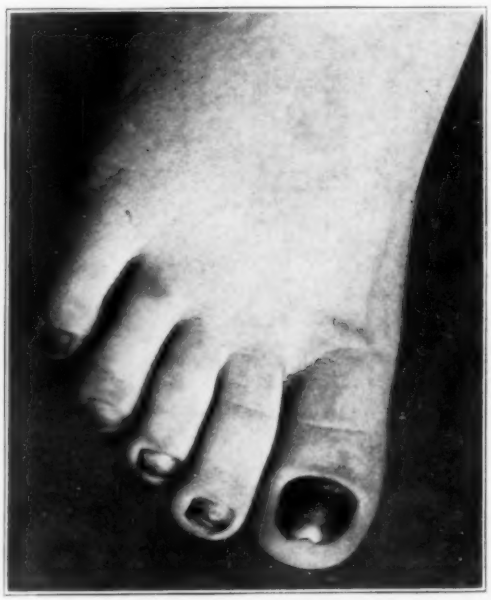

Fig. 3.—Appearance of toe nails.

Fig. 4.—Appearance of toe nails.

April 17, 1920: Color, lemon; reaction, acid; specific gravity, 1.030; albumin, negative; sugar, negative; indican, +; white blood cells.

April 19, 1920: Color, straw; reaction, acid; specific gravity, 1.022; albumin, slight trace; sugar, negative; indican, —; same as above.

Blood Examination.—Cell count: April 12, 1920: Red blood cells, 4,960,000; white blood cells, 23,000; hemoglobin, 80 per cent. Talqvist; polymorphonuclears, 70 per cent.; small mononuclears, 25; large mononuclears, 3; transitionals, 2.

April 15, 1920: Whilte blood cells, 19,500; polymorphonuclears, 73 per cent.; small mononuclears, 22; large mononuclears, 4; transitionals, 1.

April 18, 1920: White blood cells, 13,800; polymorphonuclears, 76 per cent.; small mononuclears, 17; large mononuclears, 7; transitionals, 0.

Fig. 5.—Appearance of fingernails; long, tapering fingers.

Fig. 6.—Appearance of fingernails; long, tapering fingers.

Fig. 7.—Roentgenogram of small sella turcica, thickened anterior and posterior clinoid processes; also thickened bony structure of base of skull.

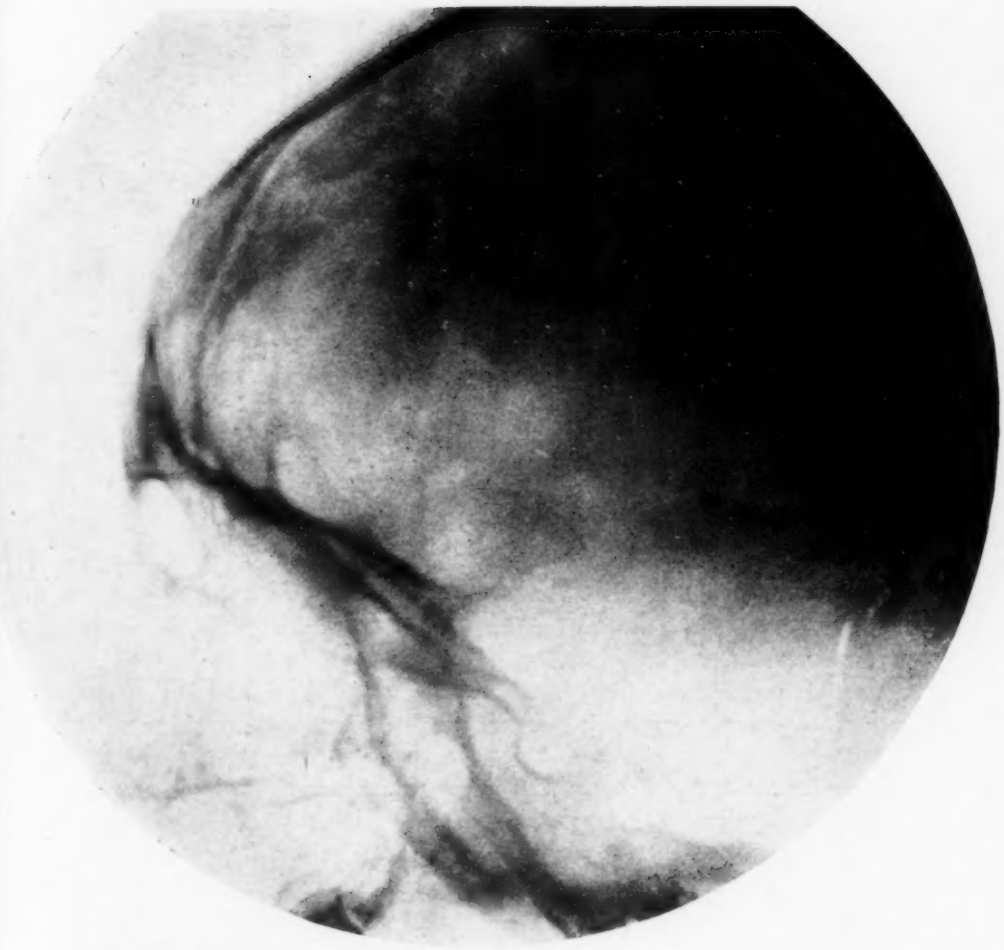

Fig. 8.—Roentgenogram showing marked difference in osseous structure of sella turcica and base of skull of normal 9 year old boy.

Complement Fixation Test: April 13, 1920: Cholesterinized antigen negative; acetone insoluble lipoid antigen, negative. Icebox: Cholesterinized antigen, negative; acetone insoluble lipoid, negative. The Goetch epinephrin test was negative.

On April 14, 1920, at 1:10 p. m., 66 gm. of glucose were given to find the patient's carbohydrate tolerance and a blood sugar test was made every half hour. The normal control was 0.36 per cent. The percentage of blood sugar at 1:40 p. m. was 0.34; at 2:10, 0.36; at 2:40, 0.42; at 3:10, 0.39; at 3.40, 0.36, and at 4:10, 0.36. The urine was also tested during this time every two hours for four successive tests, but no glycosuria could be elicited.

Spinal puncture and cystoscopic examination of the kidneys were not permitted by the parents.

DIAGNOSIS

The patient's general appearance, marked feminine character of the breasts and broad pelvis, slight suggestion of genu valgum, dry skin and hair, absence of signs of axillary or pubic hair, small genitalia, highly arched palate, enormous appetite, history of epilepsy (petit mal), frequency of and duration of colds (bronchitis), the appearance of the roentgen-ray findings, showing a small sella turcica with hypertrophy of the anterior and posterior clinoid processes, and his apparently high carbohydrate tolerance leads to the conclusion that this was a case of hypopituitarism, and that the trophic changes occurring in the nails may be safely attributed to this cause.

The optic atrophy, which the examination of his eyes revealed and which is likely to grow worse resulting in progressive failure of vision, is not due to his apparent hypopituitarism, and a trial of antispecific medication should be made.

His leukocyte count, so far unexplained, may be due to focal infection of tonsillar origin. Indicanuria and pain in the lumbar region are unexplained and for the present passed over as of less importance.

In a general way, with the exception of onychauxis, which was the cause of the investigation of this case, the case resembles very much a case described by Harvey Cushing.[1] His patient showed epilepsy, feminism, adiposity, overgrowth, suffering from colds, enormous appetite, sella turcica below normal size and an unusual solidity of the sphenoidal bone, broad pelvis, genu valgum, giving the body a feminine aspect, dry skin, no axillary or pubic hair, high carbohydrate tolerance and small genitalia. Our patient showed all these abnormalities in addition to the other signs described.

Cushing considers his case one of preadolescent dyspituitarism belonging to the group of dystrophia adiposogenitalis of the typus Frohlich, in which classification I believe the case under my observation may be included.

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1. Cushing, Harvey: The Pituitary Body and Its Disorders, 1912; Case 34, p. 175.

TREATMENT

For treatment pituitary glandular feeding and antisyphilitic medication was advised.

ETIOLOGY OF ONYCHAUXIS

The etiologic factors entering into consideration of onychauxis are numerous:

Ormsby attributes them to local irritation from pressure, filth, neglect.

Pusey [3] states that enlargements may occur in acromegaly, that also in some cases they are due to developmental defects, or the result of circulatory disturbances.

Sutton [4] shows a very good illustration of onychauxis due to syphilis in Irwin C. Sutton's case.

Darier [5] considers the etiologic factors of all the onychoses under five distinct heads. This would also include onychauxis.

(*a*) Congenital malformations.

(*b*) Local causes, traumatism, parasitic affections.

(*c*) Localization of various dermatoses.

(*d*) Effect of general disease.

(*e*) Trophoneuroses.

In placing this case in the group of trophoneuroses due to hypopituitarism, I have not lost sight of the fact that there may be an hereditary syphilitic element and focal infection, but the presence of syphilis or focal infection could not be clearly demonstrated, while the evidence in favor of hypopituitarism is seemingly overwhelming. The entire clinical picture presented might possibly be cleared up if the presence of syphilis could be satisfactorily demonstrated.

I wish to express my gratitude to Drs. John W. Boyce, Adolph Krebs, George W. Grier and William H. Mayer for their cooperation in establishing this diagnosis.

7133 Jenkins Arcade.

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2. Ormsby: Diseases of the Skin, Philadelphia, Lea & Febiger, 1915, p. 1100.
3. Pusey: Principles and Practice of Dermatology, New York, D. Appleton & Co., 1917, p. 1187.
4. Sutton: Diseases of the Skin, St. Louis, C. V. Mosby Co., 1917, p. 864.
5. Darrier, T., and Pollitzer: Textbook of Dermatology, Philadelphia, Lea & Febiger, 1920, p. 431.

INTRASPINAL TREATMENT IN NEUROSYPHILIS

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More than six years have elapsed since Dr. Oliver S. Ormsby and the writer instituted intraspinal therapy in our cases of neurosyphilis. Sufficient time, therefore, has passed to justify a survey of the clinical and serologic results obtained by this form of treatment.

LITERATURE ON THE SUBJECT

Many criticisms, notably those of Sachs [1] and of Dercum,[2] have been directed against intraspinal therapy on the ground that no clinical results can be obtained by the introduction of arsphenamized serum into the spinal canal, because it can be demonstrated experimentally that substances injected subdurally cannot penetrate the cortex of the brain, and that changes in the spinal tissue are beyond the reach of remedies in solution in the spinal fluid. Sachs firmly believes that sufficiently intensive intravenous medication will accomplish all that intraspinal therapy will accomplish. That arsenic appears in appreciable quantities in the fluid after intravenous injections of arsphenamin has been demonstrated by a number of workers, but the early work of Weed [3] and of Frazier [4] seemed to prove that dyes injected intravenously penetrated only the pial meshes, whereas dyes injected intraspinally penetrated not only the pial surfaces of the brain, but also the cortex.

Recently, attempts by Tzanck, Gilpin and Early, and by Barbat, have been made to increase the permeability of the choroid plexus for arsphenamin by spinal drainage after intravenous injection. Barbat [5] found that whereas only 31 per cent. of the cases punctured in twenty minutes after intravenous injection gave positive tests for arsenic,

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1. Sachs, B.: On the Intravenous, Not the Intraspinal, Use of Arsphenamin in Syphilis of the Nervous System, Arch. Neurol. & Psychiat. **1**:277 (March) 1919.

2. Dercum, Francis X.: The Functions of the Cerebrospinal Fluid, with a Special Consideration of Spinal Drainage and of Intraspinal Injections of Arsphenamized Serum, Arch. Neurol. & Psychiat. **3**:230 (March) 1920.

3. Weed, L. H.: Studies on Cerebrospinal Fluid. III. The Pathways of Escape from Subarachnoid Spaces, with Particular Reference to the Arachnoid Villi, J. Med. Res. **26**:51, 1914-1915.

4. Frazier, Charles H.: Cerebrospinal Fluid in Health and Disease, J. A. M. A. **64**:934 (March 13) 1915.

5. Barbat, J. Henry: Permeability of the Meninges to Arsenic in Paresis and Tabes, J. A. M. A. **70**:147 (Jan. 19) 1918.

twenty-five out of twenty-six cases gave positive tests when the fluid was examined twenty-four hours after the injection. Hall [6] has endeavored to bring about a still greater permeability of the choroid plexus by the irritation of an intraspinal injection of the patient's serum preceding the intravenous injection of arsphenamin. It was found that intravenous injection of arsphenamin six hours after meningeal irritation by the injection of serum gave 92 per cent. penetrations and resulted in an average concentration of arsphenamin three times greater than that of the controls.

The addition of a solution of neo-arsphenamin directly to the spinal fluid, first practiced by Ravaut, was later modified by Marinesco, Ogilvie, Fordyce and others, who have added solutions of arsphenamin to the plain serum or to the arsphenamized serum of the patient. Kolmer [7] has made further modifications which consist essentially in saturating the patient with mercury or potassium iodid before giving the intravenous injections, and in drawing the blood into sodium citrate solution immediately after the intravenous injection. The solution of arsphenamin (usually 0.0003 gm.) is then added to 10 c.c of serum and heated for thirty minutes at 56 C. About 30 c.c. of spinal fluid are drained off and the arsphenamized serum is injected. The principal advantages advanced by Kolmer for this technic are: (1) time saved, due to drawing the blood into citrate; (2) combining intravenous and intraspinous medication with mercury and potassium iodid, and (3) drawing 30 c.c. of fluid and injecting only 10 c.c., giving, thereby, the advantage of spinal drainage.

How much of the efficacy of the intraspinous medication depends on the irritation set up by the serum introduced, and how much depends on the direct action of the arsphenamin held in solution, remains to be determined. If the therapeutic action of the serum be due alone to the irritation induced, it may be argued that the addition of arsphenamin merely intensifies this irritation, and that the better results obtained from arsphenamized serum are due to the increase in the irritative quality of the serum and not to the spirocheticidal action of the arsphenamin.

Swift [8] has shown that blood drawn one hour after the injection of a full dose of arsphenamin contains approximately 0.000016 gm. of arsphenamin per cubic centimeter. Thirty-five cubic centimeters of serum, which have been drawn about fifteen minutes after the intra-

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6. Hall, A. W., in discussion on Bassoe, Peter: Swift-Ellis Intraspinous Injections for General Paresis, Arch. Neurol & Psychiat. **2**:485 (Oct.) 1919.

7. Kolmer, John A.: A Method of Treatment for Neurosyphilis, J. A. M. A. **74**:794 (March 20) 1920.

8. Swift, Homer F.: Intraspinal Therapy in Syphilis of the Central Nervous System, J. A. M. A. **65**:209 (July 17) 1915.

venous injection, would, therefore, contain at least 0.00056 gm. of arsphenamin, if not more. Kolmer [7] has added, as a rule, only 0.0003 gm. (with a maximum of only 0.0009 gm.) in 10 c.c. of serum, which would give, therefore, a dosage of only 0.00046 gm., as against 0.00056 gm. by the older method. Fordyce [9] adds, as a rule, 0.0005 gm. of arsphenamin to 10 c.c., which would be equivalent to 30 c.c. of serum, and instead of spinal drainage, as practiced by Kolmer, he mixes the serum thoroughly with spinal fluid before reinjecting, for the purpose of bringing about greater diffusion in the spinal fluid.

The minute quantities of arsphenamin injected, even when the serum has been "fortified," are insignificant as compared with the amount of arsphenamin required to be of any therapeutic value when given intravenously. At Rush Medical Dispensary, Dr. Bertha Shafer found that 0.1 gm. of arsphenamin injected intravenously daily for long periods did not impede the progress of the secondary manifestations of syphilis. Therefore, it would seem to be illogical to expect sufficient spirocheticidal activity from the minute amounts contained in, or added to, serum which is injected intraspinously every two to four weeks, to be of much value therapeutically.

Dercum [2] is emphatic in his statements concerning the futility of intraspinal injections. He says the method is unscientific, because it is based on the mistaken view that the nutrition of the nervous system is carried on by means of the cerebrospinal fluid. Dercum points out that substances introduced into the cerebrospinal fluid rapidly disappear, passing through the arachnoidal villi into the venous system without entering the parenchyma of the central nervous system. The only action that can be ascribed to arsphenamin introduced into the subarachnoid space in simple solution is the inflammatory process set up by the drug. Dercum made use of the Swift-Ellis method of treatment in a large series of cases, but abandoned it entirely in favor of spinal drainage, on which, in his opinion, the efficacy of the older method depends.

DERCUM'S TECHNIC OF SPINAL DRAINAGE

With the method of spinal drainage, as carried out by Dercum, the patients are put to bed and every possible drop of spinal fluid is withdrawn at weekly or biweekly intervals. The improvement that takes place after this procedure is much more striking, according to Dercum, than that which follows the introduction of arsphenamized serum. The drainage results in a fall in the intradural pressure, which theoretically should be followed by an increased vascularity in the cord, similar to

9. Fordyce, J. A.: Intraspinal Therapy in Neurosyphilis, Am. J. Syphilis 3:337 (July) 1919.

Bier's hyperemia. The spinal fluid drawn off is rapidly replaced, and thereby lavage occurs. The increase in the pressure of the spinal fluid in tabes and paresis is due, as a rule, to obstruction in the arachnoidal villi, and in the lymphatics to the outflow of the fluid. The spinal drainage, therefore, is a successful method of overcoming the increase in pressure of the fluid and the consequent reduction of vascularity of the brain and spinal cord.

AUTHOR'S TECHNIC

In a series of cases forming the material on which this report is based, slightly modified Swift-Ellis technic was followed. At first the exact method described by Swift and Ellis was used. Later slight modifications were made from time to time in an effort to determine the tolerance of the patient for increased doses of the serum, and to lessen as much as possible the reactions following intraspinal injections. In some cases an amount of spinal fluid approximately twice that of the amount of serum injected was withdrawn. Some of these patients, however, developed a severe headache after leaving the hospital. This practice was, therefore, discontinued, and later, as a rule, we withdrew slightly less fluid than the amount of serum injected. If an insufficient amount of fluid was withdrawn, the root pains following the injections seemed to be intensified.

The technic of the injection as used during the period between January, 1914, and October, 1918, was as follows: In the early afternoon the patient was given an intravenous injection of arsphenamin. From fifteen to forty minutes after the injection, about 100 c.c. of blood were withdrawn into a sterile bottle of that capacity. The bottle was stoppered and allowed to stand at room temperature until clotting had taken place. It was then placed in the icebox where it was kept over night. The following day the serum was decanted, centrifugated and inactivated in the usual manner. About 35 c.c. of this serum, undiluted with either salt solution or spinal fluid, were injected into the spinal canal after withdrawing approximately an equal quantity of spinal fluid. As a rule, one or two hypodermic injections of morphin were necessary during the night to control the pain. Many patients, however, did not complain of pain, and practically all of them left the hospital by noon the following day. The spinal fluid was then examined and the four principal tests, namely, the cell count, the globulin reaction, the Wassermann reaction using 0.2, 0.4, 0.6, 0.8 and 1 c.c., and the Lange gold chlorid reaction, were made after each injection. In this way we had a careful serologic control showing the progress of the therapy.

During this five year period we did not "fortify" the serum, after the manner of Fordyce and Ogilvie, by the addition of a solution of

arsphenamin. Some of the early reports of the injections of arsphenamin and neo-arsphenamin directly into the spinal canal mentioned the loss of sphincter control in an occasional case, and we preferred to err on the side of conservatism rather than to take chances of possible damage to the patient. Recently, however, we have been using the method described by Fordyce, and at a later date we shall be in a position to make a comparison of the results of the two methods.

All of our patients who were treated by means of the intraspinal injection were given a series of intravenous injections before beginning the intraspinal treatment, and only those patients who did not respond to the intravenous medication were treated intraspinously. No one who has given intraspinal injections to patients who have not responded to intravenous injections can fail to see the great value of the subdural injection. Whether this be due to irritation of the serum, to the spirocheticidal action of the arsphenamin contained therein, or to the spinal drainage which incidentally takes place, the fact remains that the Swift-Ellis method will bring about marked serologic and clinical improvement in cases that have failed to respond to intravenous medication alone. This is particularly true in those patients with a high cell count and strongly positive fluid. One patient seen at Rush Medical College who had an intense headache and a partial hemiplegia, which had persisted in spite of eight intravenous injections at frequent intervals, was given one intraspinal injection in the usual way. The fluid showed 1,000 cells and the other findings were likewise strongly positive. After this one injection the pain promptly ceased and the partial hemiplegia cleared up.

CASES STUDIED

The clinical material forming the subject of this review consists of fifty-two private patients with syphilis of the central nervous system, treated during a period of approximately five years between January, 1914, and October, 1918. Patients coming under treatment since October, 1918, are not included in this series, because insufficient time has elapsed since beginning the treatment to justify a conclusion concerning the ultimate result.

Of the fifty-two cases there were twenty cases of paresis, twenty-five cases of tabes dorsalis, and seven cases of central nervous system syphilis, such as meningitis and arteritis. The fifty-two patients received three hundred and ten intraspinal injections which, as a rule, were given at monthly intervals. For obvious reasons, it was impossible to control the patients in all cases. Some paretic patients were so unruly when first coming under observation, and such a burden to their families, that it was thought better to have them committed to institutions rather than attempt to attain an improvement, which at

best could be only temporary. Some of these patients died of intercurrent infections and one committed suicide. A few of the patients lived in distant cities and the time and money necessary for travel made the injections almost prohibitive. Therefore, a statistical study of the group does not do justice to the value of this method of treatment as a detailed report of the individual cases would do, but nevertheless, the statistical study is of value in aiding us to arrive at a prognosis in future cases.

Of the twenty patients with paresis, eleven are now dead. It is an interesting fact that these eleven patients received an average of 3.5 injections each, whereas seven paretics who are much improved clinically and are still living received an average of fifteen injections each. Therefore, it is fair to assume that had it not been impossible, for reasons mentioned above, to give these patients more injections, some of them at least might still be living. Two paretics, who are still alive, show thus far little improvement either clinically or serologically.

Of the twenty-five patients with tabes, thirteen show marked clinical improvement, and at the last examination the spinal fluid was negative. Ten patients are much improved clinically, but the fluid is still positive. Two of the patients with tabes have passed from our control, and their present condition is unknown.

Of the seven patients with central nervous system syphilis other than tabes or paresis, four patients are much improved clinically and have negative spinal fluids. In one case the fluid cleared and later became positive. In another case the fluid remains strongly positive.

CONCLUSIONS

1. The Swift-Ellis intraspinal method of treatment of syphilis of the central nervous system is superior to intensive intravenous treatment alone.

2. Whether the efficacy of the method of treatment depends on (*a*) the irritative action of the serum, thereby increasing the permeability of the choroid plexus for arsphenamin; on (*b*) the spirocheticidal action of the arsphenamized serum, or on (*c*) spinal drainage, remains to be determined.

3. The method is perfectly safe when care is exercised in technic and in the proper selection of cases, and should be resorted to in all cases in which the patient fails to respond to intravenous medication.

25 East Washington Street.

TWO CASES ILLUSTRATING UNUSUAL MANIFESTATIONS OF SYPHILIS*

1. GUMMA OF THE BLADDER
2. URTICARIAL SYPHILID

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REPORT OF CASES

CASE 1.—The salient features of the case are: A gummatous invasion of the bladder wall resulting in dysuria, leading to an erroneous diagnosis of gonorrhea; cystoscopic examination revealing a sharply marginated growth in the bladder wall; a positive Wassermann reaction, and prompt relief after institution of anti-specific treatment.

History.—A woman, aged 21, first seen Sept. 10, 1919, was referred to me by Dr. J. J. Eklund. She appeared to be well nourished, was 5 feet, 2 inches tall and weighed about 130 pounds. She admitted having had gonorrhea some time previously, but denied any other infectious disease and had always been well.

Her chief complaint was frequent and painful urination which had lasted for four months, continually growing worse. She had been treated for a supposedly gonorrheal cystitis with bladder irrigations and internal medication, but without benefit. The urination was more frequent at night; there was a constant feeling of discomfort in the bladder region, and a radiating pain toward the left groin.

Urinary and Bladder Examination.—The urine showed abundant pus cells and a few red blood cells intermingled. Gonococci could not be demonstrated, but there were other unidentified bacteria. Cystoscopic examination showed that the bladder was especially inflamed in the region of the trigone. Both ureters seemed to be functioning normally. A growth about 2 cm., back of the left ureteral orifice could be distinctly seen. This measured about 2.5 cm. in diameter, was raised about 0.5 cm. from the normal bladder surface, was sharply marginated and quite round; it had certain bleeding points near its center. Thus it had the appearance of a nonpedunculated, mildly inflammatory papilloma.

General Examination.—There was positively no evidence of old or recent skin lesions. There were, however, small, hard and easily palpable glands in the groin, more particularly on the left side. There was a slight vaginal discharge; smears were negative to gonococci. There was no particular cervical irritation or vaginal inflammation. She did not look anemic; the hemoglobin was 90 per cent. and there were 4,800,000 red blood cells. The blood Wassermann test was ++++.

Treatment.—Specific treatment was started on September 11. This was followed by definite and prompt improvement, the urinary symptoms becoming less disturbing immediately. By October 1 there was great relief. A cystos-

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copy done on October 5 showed that the tumor had entirely disappeared and that only a slight inflammatory area could be seen where it had been previously. She has kept up treatment faithfully, and is now apparently well.

COMMENT

There appears to be no reason to doubt that this was a case of gumma of the bladder.

Lloyd Thompson [1] has reported eighty-four cases in the literature. Of these eighty-four cases, he thought fifty-eight were authentic. In 1901, MacGowan [2] reported a gumma of the bladder diagnosed by cystoscopy. Haberdeen,[3] in 1911, reported the first case in which a Wassermann test confirmed the diagnosis.

CASE 2.—This case presented severe, urticaria-like lesions which rapidly appeared and disappeared, producing raw surfaces and gradual pigmentation.

History.—The patient was a man, aged 26, a painter. He was seen first Dec. 1, 1919. He acknowledged a few of the exanthemata, but had never been seriously sick. After returning from the A. E. F. he developed a skin rash accompanied by severe itching. It gradually spread despite various forms of treatment, and covered a large part of his body.

General Examination.—The patient looked pale, tired and worried. His height was 5 feet, 10 inches and his normal weight was 175 pounds, but he had lost 25 pounds since the beginning of his illness.

He had had a little hoarseness for some time, but a nose and throat specialist whom he had consulted could find nothing wrong with his throat. Hard, shotlike glands could easily be felt in the groin, and a few in the posterior occipital region. The epitrochlears could not be felt. The urine was negative; blood pressure was normal; hemoglobin, 70 per cent.; red blood cells 3,500,000, and white blood cells 9,000.

Description of Skin Lesions.—The whole skin was plastered with ointment of zinc oxid, for the time being rather fully concealing the character of the skin lesion. On Dec. 5, 1919, the rash had become very troublesome, and he was unable to put on his clothes. Over the back, chest, neck and arms, as well as on his legs, were patches varying in size from 1 to 7 or 8 inches in diameter, in places raised ⅛ inch over the normal surface, and sharply marginated. In the center of most of the patches there were thin scales. Raw spots developed, particularly at points of rubbing or irritation—in the region of the buttocks and neck especially. The itching and burning were severe. Besides these large lesions, there were a few smaller squamous lesions here and there, and some discoid patches on the forehead. It was noted that some of the urticaria-like lesions, and even the large raw places, disappeared in twenty-four hours, and new ones elsewhere reappeared. Pigmentation was prone to develop early in those that showed healing.

Course and Treatment.—Ten days after the first intravenous injection of arsphenamin the itching had greatly abated, and in two weeks no urticarial

1. Thompson, Lloyd: Syphilis of the Bladder, Am. J. Syphilis **4**:50 (Jan.) 1920.

2. MacGowan: Cutan. & G.-U. Jour. of New York, 1901.

3. Habereen, J. P.: Zentralbl. f. chir. **38**:663, 1911.

lesions or raw spots could be seen. The squamous lesions were a little slow in disappearing, and considerable pigmentation continued to develop. The hoarseness was still slower in disappearing. He gained in weight rapidly. At the present time (March 28, 1920) he is in excellent condition.

COMMENT

This case is reported because of the rare, urticaria-like skin lesions and the extensive raw areas, which are equally rare in syphilitic patients.

OBSERVATIONS ON THE TREATMENT OF SYPHILIS

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Syphilis generally is probably as poorly treated as any disease with which we have to contend. Every medical man properly includes syphilis in his field, and should know the modern methods of treatment; unfortunately, many do not. A survey of specific therapy administered to approximately 3,000 civilian syphilitic persons by reputable physicians reveals some rather startling facts. In September, 1919, I [1] reported as follows: Of 113,000 men examined at Camp Travis, 3,000 were found to have infectious lesions of syphilis. A fair proportion of these had consulted reputable physicians at one time or another, and yet we gleaned such facts as the following from their histories: Local caustic and antiseptic applications were freely used by physicians and patients alike, not a single dark field examination having been made in any case prior to entering the service. A negative Wassermann reaction during the first few days of the infection was accepted as sufficient evidence of the absence of syphilis. Late syphilis with negative Wassermann reactions were usually missed. Treatment with pills and mixed treatment were the usual methods employed, but five men having received the equivalent of a single eight-week course of treatment such as outlined by the Surgeon-General's committee on venereal diseases. There seemed to be no plan of treatment other than that directed by the visible manifestations of the disease, and when these disappeared, treatment stopped. The reason why the average doctor believes deep down in his heart that syphilis is an incurable disease is readily understood when his treatment of the disease stands in the light of our present knowledge.

It should be considered criminal deliberately to await the appearance of secondary manifestations of the disease before starting treatment. The so-called tonic treatment should be relegated to antiquity because we now recognize that we are dealing with a constitutional infection that is caused by a specific organism that may be destroyed in vivo as well as in vitro by definite spirocheticides which in sufficient concentration will destroy every organism encountered. If we were able to stop there, the immediate cure of syphilitic persons would indeed be a simple matter, but unfortunately there are further considerations. We know that the spirochete has a certain affinity for epithelial structures, that it attacks all tissues and organs, and that further, as demon-

1. Guy: Analysis of the Venereal Situation, Urol. & Cutan. Rev. **23**:512 (Sept.) 1919.

strated by Nichols,[2] different strains may determine selective localization of spirochetes difficult to reach with our drugs. Warthin [3] describes in minutiae the pathology of syphilis, and states that he has never seen pathologically a cured case of syphilis, but neglects to tell us what treatment cases had had that came to his necropsy table. He shows the facility with which the spirochete localizes in different tissues and perhaps underestimates our ability to destroy the organism. We are limited in our therapeutic attack by the ability of our patients to tolerate drugs, and while toleration varies considerably in different persons, there are certain limits beyond which we dare not go. We estimate dosage of arsphenamin according to the body weight of the person, usually at the rate of 0.1 gm. to each 30 pounds of body weight, because this is well above the amount that is effective from a therapeutic standpoint, and at the same time clinical experience has shown that such an amount may be given with comparative safety. In using mercury we are limited to dosage that will not salivate our patients or damage vital structures, regardless of the salt used or the method of introducing it into the body, and yet we are able to accomplish much with mercury either alone or used in conjunction with arsphenamin.

ARSPHENAMIN AND MERCURY MEDICATION

The relative efficiency of the drugs is in the minds of many an open question. Kolmer's [4] work in vitro-vivo with arsphenamin and mercury in experimental trypanosomiasis demonstrated trypanocidal action for arsphenamin in a dilution of 1 : 40,000, and at the same time conclusively demonstrated the superiority of arsphenamin over mercury as a trypanocide. Although we repeatedly examined primary lesions after the injection of a full therapeutic dose of arsphenamin, we were unable to find spirochetes later than one hour and a half after the treatment. When examinations were made at ten minute intervals actively motile spirochetes were first noted, then those with feeble motility, then nonmotile and distorted forms, and finally the absence of organisms. On the other hand, I have on several occasions noted spirochetes seventy-two hours after an injection of mercury. And yet Ehrlich failed in his attempted "therapia magna sterilisans." The principle reason for his failure was the rapid elimination of the drug. Swift and Ellis [5] were able to find no spirocheticidal activity of

2. Nichols, H. G.: Observations on a Strain of Spirochaeta Pallida Isolated from the Nervous System, J. Exper. M. **19**:362, 1914.

3. Warthin, A. S.: The New Pathology of Syphilis, Am. J. Syphilis, **2**:425 (July) 1918.

4. Kolmer: Chemotherapy of Trypanosomiasis, J. Infect. Dis. **20**:10, 35 (Jan.) 1917.

5. Swift and Ellis: New York M. J. **96**:53, 1912.

blood serum six hours after the injection of a full therapeutic dose of arsphenamin. Another reason for Ehrlich's failure is the facility with which the spirochete buries itself far from the general circulation.

In order to overcome these difficulties Pollitzer[6] states that "salvarsan should be administered in sufficient dosage, repeated at such intervals that the blood is kept charged with the drug for several days continuously." He approaches these conditions by giving arsphenamin on each of three successive days at the rate of 0.1 gm. to each 30 pounds of body weight, followed by a course of mercury. By this method he has been able to bring about a reversal of the Wassermann reaction in cases in which it has been persistently positive after repeated courses of less intensive medication. He also reports a series of patients with primary syphilis—in which the diagnosis was made by the dark field method, the Wassermann reaction being negative—in which a single such course was given. After about a year there was no indication either clinical or serologic of syphilitic infection. I have treated twenty-five patients in a similar condition in the same manner, and have kept ten of them under observation for a year without being able to demonstrate clinical or serologic evidence of remaining infection. In ten other patients with primary syphilis, three of whom already had positive Wassermann reactions, I have used a modification of his plan. As soon as the diagnosis was established, arsphenamin at the rate of 0.1 gm. to each 30 pounds of body weight was given on each of three successive days; two weeks later this treatment was repeated; and in a month three more injections were given, making a total of nine injections in six weeks. With this, weekly injections of the mercuric salicylate were given for a total of ten weeks, making a total of nine injections of arsphenamin and ten of mercury in ten weeks. Six of these patients were under observation for a year with negative results; the other patients were lost by transfer to other camps or overseas. The balance of our primary cases, numbering about 365, were given routine treatment according to the plan of the Surgeon-General's advisory committee. These patients were given two complete courses, each comprising eight injections of arsphenamin and eight of mercury, the therapeutic rest period being five weeks. We have been unable to keep many under observation for a year, but the majority of them were clinically and serologically negative when last examined. About a third of the patients were under observation for at least eight months. One developed an annular macular eruption and four others were found to have positive Wassermann reactions within this time. In young, robust persons with pri-

6. Pollitzer, S.: The Principles of the Treatment of Syphilis, J. Cutan. Dis. **24**:633 (Sept.) 1916.

mary lesions our aim is to abort the disease by destroying every infecting spirochete, and this may be done with a reasonable degree of certainty when we overcome the obstacles to Ehrlich's hoped for immediate therapeutic victory.

LENGTH OF TREATMENT AND DOSAGE

There are two ways in which we may expect to destroy more spirochetes in a given length of time; one is by giving arsphenamin at more frequent intervals, and the other is by increasing the amount administered at each injection. I have repeatedly given arsphenamin at the rate of 0.1 gm. to 20 pounds of body weight, up to and including 0.8 gm., without reaction. In one patient weighing 120 pounds, 0.5 gm. was given on each of three successive days without untoward results. With manufacturers offering a drug of much lower toxicity than formerly it seems logical to take advantage of the opportunity to increase our therapeutic results. A plan to keep the blood stream saturated with arsenic for a considerable number of hours that is worthy of mention is that of Reiger.[7] He uses neo-arsphenamin, on account of the low toxicity, giving 0.9 gm. at the first injection, 0.6 gm. in an hour and 0.3 gm. at the end of the third hour. The time and amount of the injections are based on the elimination rate of the drug. Much better clinical results are claimed by this than by ordinary methods. The theory is advanced that arsenic will reach the spinal fluid in appreciable amounts after such treatment.

Fordyce [8] believes that in routine work, injections should not be given at shorter intervals than from five days to a week, and in this respect most syphilographers are in accord, favoring rather a method of fractional sterilization than to attempt an immediate therapeutic victory. Short, intensive courses of arsphenamin and mercury used in conjunction are favored. Such methods have the advantage of comparative safety over more intensive treatment, and certainly no one can discount the results that have been obtained. The length of courses varies in different hands, but usually comprises from eight to ten weekly injections of arsphenamin and the same number of injections of mercury, followed by a period during which no medication is given. The necessity of rest periods during antisyphilitic treatment was long ago pointed out by Fournier. In the laboratory, Noguchi [9] has been

7. Rieger, J. B., and Solomon, H. C.: The Circulation of Arsenic in the Cerebrospinal Fluid, J. A. M. A. **71**:15 (July) 1918.

8. Fordyce, J. A.: Diagnosis and Treatment of Syphilis, Am. J. Med. Sc. **152**:469 (Oct.) 1916.

9. Akatsu Seinai and Noguchi Hideyo: The Drug Fastness of Spirochetes to Arsenic Mercurial and Iodide Compounds in Vitro, J. Exper. Med. **25**:349 (March) 1917.

able to increase the tolerance of spirochetes for arsphenamin five to six fold by gradually increasing the amount of the drug in his culture medium. The toleration for mercury was increased from thirty-five to seventy times the original. He also found that this acquired immunity on the part of the spirochete to the action of arsphenamin and mercury would disappear on cultivation in mediums free of the drug. Thus Noguchi produced scientific proof of the accuracy of Fournier's clinical observations and placed on a scientific basis the prolonged intermittent treatment of syphilis. The patient should be given a rest period of sufficient length to recover physically from the course of treatment just finished, as well as to prevent the formation of an arsenic and mercury fast strain of spirochete from too sustained treatment, the time being limited by the probable date of clinical or serological recurrence. I consider that a period varying from five to eight weeks is required. At the close of a rest period a Wassermann reaction will be obtained that will give a more reliable check on the results of therapy than that which might be taken while the patient is on active medication.

DEPENDENCE OF TREATMENT ON INDIVIDUAL AND ON STAGE OF DISEASE

Regardless of theories and plans for the treatment of syphilis, however, we must remember that we are treating a patient as well as a disease, and govern ourselves accordingly. Absolute generalization in the application of specific therapy will lead to disaster. All patients may not be treated intensively. Some will not tolerate mercury in one form or another, and there are some who cannot tolerate arsenic. One must be very cautious in the application of antisyphilitic treatment, particularly with pathologic conditions affecting the cardiovascular, renal and pulmonary apparatus, and with modifications of therapy as the result of such pathology, one must necessarily continue treatment much longer. Again, the kind and amount of treatment will vary with the stage and location of the disease. One is justified in disregarding the possibility of reaction following arsphenamin in order that treatment may be started twenty-four hours sooner in cases of dark field positive cases than would otherwise be possible. It is obvious that a patient with a primary lesion will require less treatment than one with florid manifestations of an early generalized infection; he, in turn, will require less treatment than a patient with a long standing infection, and the patient with evident infection of the central nervous system will require more treatment, and in many cases the application of special therapy, to reach the disease. The chances of a cure are to some extent dependent on not only the kind of treatment that the patient receives, but also on the status of the infection at the time

treatment is instituted. Our ideas as to the amount of treatment necessary to cure syphilis are largely empiric, but we no longer blindly state that from three to five years of mercurial treatment are necessary to cure any case of syphilis. The advent of arsphenamin has materially shortened the time, as has also early diagnosis by the dark field method and correspondingly early institution of vigorous specific treatment. In the Wassermann reaction we have an invaluable aid in determining the effect of therapy, but in order that we may arrive at any definite conclusions bearing on the question, we must take into consideration the opinions of close observers with vast experience in modern therapy. Fordyce [8] states that in primary syphilis, before the Wassermann reaction has become positive, it is possible to abort the infection; that such patients should receive two courses of arsphenamin and mercury used in conjunction; that in secondary syphilis three courses is usually the minimum required; while in tertiary cases the method of treatment depends on the tissues or organs involved. Using weekly injections of arsphenamin and an insoluble salt of mercury in six-, eight- and ten-week courses, we consider that one course will cure a certain percentage of cases, but that two courses are usually needed. Pollitzer shows that one course such as he advocates will cure, but gives his patients an additional course of the same kind "for insurance." Of patients with secondary manifestations at the time of the beginning treatment, I require a negative Wassermann reaction and negative clinical findings after each of three consecutive courses of treatment. This has often meant four, five or six courses instead of three, but I believe it is necessary, because when the patient becomes asymptomatic, our principal guide is the Wassermann reaction, and failure to cause its reversal after a course, or a return to positive after the reaction has been negative spells an active infection.

Of about 2,500 patients with early or secondary syphilis, comparatively few were held in camp sufficiently long to complete three courses of treatment; many of them were sent to France after a single course of treatment if the Wassermann reaction was negative, and they were free from lesions, treatment being continued on their syphilitic registers regardless of where they were sent. It is interesting to note that eight weekly arsphenamin and a similar number of mercury injections caused a reversal of the Wassermann reaction in over 98 per cent. of these cases. Approximately 1,000 men received two courses and about 300 were given three courses, a few patients with refractory cases receiving additional courses according to the indications. None of these patients had been under observation sufficiently long to justify any conclusions regarding the end results of the therapy. As a rule, the older the infection the most difficult it is to cure. In late cases, repeated courses plus the iodids, for their effects as resolvents of

specific infiltrations, are necessary. When we have given the treatment we believe to be indicated, and have obtained repeated negative Wassermann reactions in addition to a clinical cure, we stop all treatment, keeping the patients under observation for at least a year during which the Wassermann tests are made every two or three months. With negative clinical and serologic findings at the close of the year of observation, it is customary to give a provocative injection of arsphenamin and to repeat the Wassermann test. As to the value of the provocative treatment, physicians do not agree. We know that the antibody content of the syphilitic blood may vary from time to time to such an extent that at one time the reaction may be weakly positive and the next time frankly negative. In an attempt to obtain some information on the subject we have in some cases used the provocative injection and in others merely repeated the Wassermann test at intervals. The number of cases available for this comparison was unfortunately too small to be conclusive, but we were not able to demonstrate provocative properties for small injections of arsphenamin. It is our impression that two- or three-week courses of iodids at times produce positive Wassermann reactions in clinical syphilis with negative tests. We have no definite data to offer in support of this theory; it is a clinical impression only, as far as we are concerned. We have used the method many times and apparently in a fair percentage of our few cases with provocative results, but the same objection holds in these cases that does in the case of the provocative injection of arsphenamin.

INTRASPINAL THERAPY

Before any patient with syphilis is finally discharged a lumbar puncture is made to determine the presence or absence of infection in the central nervous system. If there is any indication of neurologic involvement before this time, of course, we do not wait, but when we realize that most of our central nervous system infections are cured by the treatment usually applied, as evidenced by the discrepancy between the number of cases showing early positive spinal findings and the infrequency of positive findings after ordinary treatment, certainly routine treatment should be given a thorough trial before special therapy is resorted to. A small group of patients with infections not more than six months old were punctured in my service and positive findings noted in 10 per cent., as evidenced by a cell count of over five, an increased globulin and a positive Wassermann test or certain changes in Lang's gold test. These patients were put on routine treatment and after two complete courses were again punctured, and only one case was doubtfully positive. It is interesting also to note that one-half of the cases with persistently positive Wassermann reactions after two courses of treatment had positive spinal fluid findings. Fordyce [8]

reports positive spinal findings in 20 per cent. of one series of secondary syphilis and 25 per cent. in another, and says it is his belief that the spirochetes are destroyed spontaneously or by therapeutic agents administered in the usual way. Obviously, early intensive treatment will prevent most late neurologic complications. The older the infection the greater the likelihood of such involvement and the more difficult its eradication.

In patients with persistent inflammatory changes in the spinal fluid additional intensive intravenous medication may bring about the desired result, or intraspinal therapy, or a combination of the two may have to be used. The same general principles hold in the sterilization of a focus of infection in the central nervous system as in the general treatment of the disease, but a modified method of therapeutic attack is necessary on account of the anatomy of the part. Direct saturation of the spinal fluid with comparatively large amounts of arsphenamin or mercury is impracticable on account of the irritating effect, and in some cases fatalities, due to overdosage. The original technic of Swift and Ellis [10] or the modification of Ogilvie,[11] with the direct addition of arsphenamin to blood serum, are the methods most in vogue at the present time. Dosage is begun with minimum amounts and gradually increased if well tolerated, about 0.5 mg. being considered the limit of safety. Treatments are given in courses, the intervals between them varying according to the reaction after each injection. Much has been said from a theoretical standpoint against intraspinal therapy, but no amount of scientific discussion can discount results that have been obtained when the method has been properly used. Speaking from a prognostic standpoint, Fordyce [12] says: "When symptoms are due to an active inflammation with strongly positive fluid, the outlook is very encouraging. Where, however, the underlying process is one of degeneration with atrophy and sclerosis, with negative or weakly positive fluid findings, the prognosis is not so hopeful."

There are those who condemn the method unreservedly, and there are those who are accused of being overenthusiastic, and according to their faith, the indications vary in the minds of different men. I should be inclined to exhaust intensive general medication before resorting to intraspinal therapy, and having done so, I should expect some clinical results in cases in which the pathologic process was not too far advanced.

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10. Swift, H. F., and Ellis, A. W. M.: The Treatment of Syphilitic Affections of the Central Nervous System with Especial Reference to the Use of Intraspinous Injections, Arch. Int. Med. **12**:331 (Sept.) 1913.

11. Ogilvie: J. A. M. A., 1914, No. 63.

12. Fordyce, J. A.: Syphilis of the Nervous System, J. Cutan. Dis. **34**: 713 (Oct.) 1916.

ACIDOSIS IN SKIN DISEASES*

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Our attention was first called to the subject of lowered alkalinity in seborrheic eruptions by the article of Barber and Semon [1] published in 1918. In a series of observations on soldiers in the British army, who had seborrheic eruptions, they found a pronounced and remarkably constant hyperacidity of the urine. This led them to the assumption that the seborrheic state is really a manifestation of relative acidosis. When the possibility of the existence of acidosis occurred to them, they began to test the therapeutic effects of giving alkali mixtures and making local applications of alkalies. Beneficial results were immediately apparent. From their clinical and chemical (urine) examinations, they considered that they had established these two fundamental facts:

1. That the majority of patients with seborrheic manifestations show a markedly increased alkaline tolerance, many of them to an astounding degree.

2. That in nearly all cases all active inflammatory processes cease, and the eruption rapidly clears when the urine has been rendered alkaline. Barber and Semon [1] did not examine the blood of their patients to determine whether there was a lowering of the alkali reserve, their investigations being limited to chemical examinations of the urine. In 1919, Schwartz, Levin and Mahnken [2] reported the results of examinations of the blood to determine the alkali reserve in 139 cases of various skin diseases. They found that 59.7 per cent. gave normal values, 35.9 per cent. showed a mild acidosis, while 3.5 per cent. gave a moderate acidosis, and one case had a severe acidosis, but the skin condition here was a complication of diabetes. Their

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* Read before the Section on Dermatology at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

1. Barber and Semon: Etiology and Treatment of Seborrhoeic Eruptions, Brit. M. J. **2**:245 (Sept.) 1918.

2. Schwartz, Levin and Mahnken: The Alkali Reserve in Various Diseases of the Skin, J. Cutan. Dis. **38**:9 (Sept.) 1919.

conclusions were that a lowering of the alkali reserve has been found sufficiently often in acne, psoriasis, urticaria, furunculosis and eczema (especially seborrheic) to warrant further investigation.

In the series of cases which we have studied, we have selected only extensive and well-marked examples of the condition. We thought that if relative acidosis were a constant accompaniment, it should be more marked in extensive and widely spread cases.

In conversing with Prof. L. G. Rowntree, whose experience in acidosis studies is extensive, he stated that he had not encountered any particular integumentary manifestation, and we, therefore, conclude that if the "seborrheic state" were a manifestation of acidosis, it should be encountered with relative frequency by one who sees acidosis constantly and in a large number of cases, occurring in a variety of conditions.[3]

Acidosis is a condition in which the concentration of bicarbonates in the blood is reduced below the normal level.[4] It is a secondary occurrence in diabetes, nephritis, certain types of diarrhea, recurrent vomiting, food intoxication and in cases in which the patient is morihund. In our series of cases, we determined the alkali reserve and in cases in which there was a marked variation, or because of some special indication, we did a complete metabolic study, including basal metabolism, and thorough physical examination by an internist. This was done to rule out some other condition which might account for the acidosis present.

DETERMINATION OF ALKALI RESERVE

In determining the alkali reserve, we found the most dependable test was the Van Slyke.[5] Oxalated blood plasma was saturated with carbon dioxid by means of repeated rotation in a separating funnel with expired air. One cubic centimeter of this plasma was placed in the receiving cup of the Van Slyke apparatus and rendered alkaline with a drop of normal ammonia. One drop of 1 per cent. solution of phenolphthalein was used as an indicator. The mixture was covered with a few drops of ethyl alcohol and drawn into the apparatus by lowering the mercury bulb. The receiving cup was washed with from 0.5 to 1 c.c. of distilled water, and this washing was likewise drawn into the apparatus. Normal sulphuric acid was then placed in the receiving cup and permitted to flow into the apparatus until the total volume of 2.5 c.c. was reached.

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3. Rowntree, L. G.: Personal communication.
4. Sellard, A. J.: Principles of Acidosis, Cambridge, Harvard Press, 1917.
5. Gradwohl, M.: Blood and Urine Chemistry, St. Louis, The C. V. Mosby Co., 1917.

The mercury bulb was lowered after closing the apparatus. The carbon dioxid found as sodium bicarbonate was liberated in a vacuum by the action of the sulphuric acid and the amount of carbon dioxid read off directly by leveling the mercury in the bulb, and in the graduated tube of the Van Slyke instrument. In all cases, the greatest care was taken to insure that the apparatus was absolutely tight, and to prevent the loss of carbon dioxid.

Normal values measured as tension of carbon dioxid are considered as varying from 80 to 53 volumes per cent. Figures between 53 and 40 volumes per cent. are taken to indicate a mild acidosis; figures below 40 volumes per cent. as more severe types of acidosis.

Alveolar air collections were made by the Ploesch method. The determinations were made on a Haldane instrument for air analysis, and the results given as tension in millimeters of mercury. The values found are essentially the same as those determined by the Van Slyke instrument, the source of the carbon dioxid being the same substance — sodium bicarbonate — in each case. Collection required the cooperation of the patient, however, and in many cases this was rendered difficult, or impossible, due to the patient's failure to understand the directions given. We used this method in some cases, but always depended on the Van Slyke instrument.

DETERMINATION OF BASAL METABOLISM

Basal metabolisms were determined after the patient had fasted fourteen hours. Air was collected in a spirometer, fashioned after the "Tissot" instrument. In each case, the patient breathed into the instrument for ten minutes, after being at absolute rest for half an hour. Duplicate air analyses were made in a Haldane instrument, and the total amount of oxygen absorbed calculated. The respiratory quotient being found, the calorific value of oxygen for the quotient in question was taken, and the number of calories of oxygen per square meter of body surface per hour calculated. Surface areas were derived from the du Bois tables and our normal figures from Miss Sandiford's table in use at the Mayo clinic. In some cases extensive eruptions on the face of the patient made the mask used in collecting the air very uncomfortable; this introduced an unavoidable element of error due to the restlessness of the patient.

Basal metabolism figures are given in percentages of deviation from the normal. Values less than 10 per cent. above or below represent normal metabolism.

SEBORRHEIC DERMATITIS

Barber and Semon[6] point out that the exudative diathesis of infancy is often a forerunner of what they call the seborrheic diathesis

6. Semon, H. C.: Sycosis Barbae, Practitioner **104**:48 (Jan.) 1920.

in adult life. In a urine and blood chemistry study of exudative cases, one does not find any degree of acidosis; in fact, the reverse is the tendency. There is an increase in fluids and there is no acetone in the urine. We were not able to find any literature on blood chemistry find-

Findings in Various Skin Diseases

Name	80-53 Volumes per Cent. Normal	53-40 Volumes per Cent. Mild Acidosis	Remarks or Other Data
Seborrheic dermatitis:			
P. R.	65.3		
J. B.	61.4		
M. H.	61.4		
J. C. B.	....	52.5	Four months pregnant
M. H.	60.5		
H. B.	54.1		
M. P.	63.0		
Eczema:			
P. G.	65.4	....	Basal metabolism, 15 per cent.
J. T.	56.0		
D. O.	72.9		
Mrs. H.	60.5		
C. B.	....	44.3	Chronic interstitial nephritis; alveolar carbon dioxid, 3.95
C. M.	63.3		
W. O. F.	65.3		
A. G.	60.5		
M. J.	59.4		
T. L. D.	....	49.5	Beginning nephritis; focal infection; creatinin, 1.9; urea nitrogen, 30.0; uric acid, 4.1; hemoglobin, 71 per cent; blood sugar, 0.09
Psoriasis:			
A. C.	53.4		
L. C. C.	57.4		
W. E.	57.0		
G. G.	....	51.0	Nephritis; creatinin, 1.9; urea nitrogen, 25.6; uric acid, 3.42
H. W.	59.7		
H. W. W.	61.7		
Gar.	56.7		
Mrs. K.	....	49.5	Focal infection; arteriosclerosis; nitrogen retention
Parapsoriasis:			
P. L.	58.0		
Miss H.	57.0		
Acne vulgaris:			
J. L.	71.0		
E. J. O.	54.8		
T. B.	58.9		
G. L.	59.0		
G. K.	....	47.6	
A. M.	74.0		
Dermatitis herpetiformis:			
V. J.	67.0		
G. M.	58.6		
Acute lupus erythematosus (disseminated)			
A. W.	....	47.8	Moribund
Acute exfoliative dermatitis:			
M. M.	62.0		
Alopecia universalis:	60.4		
Furunculosis:			
G. H.	57.65		

ings on patients with exudative diathesis. Inquiry among pediatricians disclosed the fact that in a large series of cases of acidosis observed, due to a variety of causes, no cases of infantile eczema or seborrheic dermatitis were encountered.[7]

7. Seham, M.: Personal communication.

In our own studies, we have been unable to establish the existence of a seborrheic state, or seborrheic diathesis. We have found no consistent change in the alkali reserve and have not found even a mild acidosis which could not be accounted for.

The alkali therapy in our hands has not been successful. We have obtained better results by placing the patients on a fat-free diet and using the ordinary well-known lotions and ointments.

PSORIASIS

We thought that if any disease would show a metabolic change, psoriasis would. The psoriasis cases were selected. Only well-marked, widely distributed cases were chosen, and these were chosen at the height of an outburst. In no cases did we find a marked change in the alkali reserve. Complete blood chemistry was done in four cases, and in all four there was an increased urea nitrogen. In three cases of psoriasis there was marked focal infection. One patient with psoriasis had a marked arteriosclerosis, although he was only 22 years of age. Rest in bed and cleaning up of foci caused such remarkable improvement in his general condition that the psoriasis, which had previously been inveterate, promptly responded to treatment. From this small experience with psoriasis, we have decided that it is advisable to have every psoriatic patient carefully examined by a competent internist, especially for infected foci.

We used alkalies in the treatment of ten patients with psoriasis, giving heavy doses of sodium bicarbonate internally and paste of equal parts of sodium bicarbonate and petrolatum externally. In none did we find striking improvement. One patient became quite ill from the heavy bicarbonate dosage (2 ounces, three times a day). He complained of severe depression, anorexia and marked irritability.[8]

CONCLUSIONS

1. We could find no marked, nor consistent change in the alkali reserve in psoriasis, acne vulgaris, eczema and seborrheic dermatitis.

2. Promiscuous alkali therapy is unscientific and inadvisable, and may produce a condition of alkalinosis which may be dangerous to the patient.

REGARDING BLOOD OR URINE CHEMISTRY

3. We have failed to find in the blood and urine the evidence of the so-called "seborrheic state."

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8. Bayliss, W. M.: Acidosis and Hydrogen-ion Concentration, Brit. M. J. 2:395 (Oct.) 1918.

4. We depended on the Van Slyke test in acidosis. The advisability of accepting changes in urinary acidity as evidence of acidosis is questionable, especially when such a simple and accurate test as the Van Slyke is obtainable.

5. We realize the number of cases studied is not conclusive, but they are suggestive of negative findings.

625 Syndicate Building.

ABSTRACT OF DISCUSSION

DR. RICHARD L. SUTTON, Kansas City, Mo.: I have found alkaline therapy efficient in infantile eczema, furunculosis and infectious eczematoid dermatitis. It is important to emphasize one of the points made by the authors, and that is, to be sure that excessive amounts of alkalies are indicated and can be taken care of by the patient. Otherwise, one is liable to come to grief.

DR. AUGUSTUS RAVOGLI, Cincinnati: The acidosis has a great deal of influence on the collagenous tissues. If we try to dissolve fibrin in some acid solutions the fibrin does not dissolve, but if we add some alkaline substance, then the fibrin will dissolve. The same thing happens in the collagenous tissues of the skin which, as a consequence of the acidosis, are made impermeable, and this causes edema. The edema is produced by the collagenous tissues retaining the serum, or better the lymph, as it is difficult for the albumin to be dissolved. The albumin in the urine when the kidney is inflamed is just the same condition as edema in the skin.

DR. SAMUEL E. SWEITZER, Minneapolis: We were disappointed at not being able to find acidosis, because when I began this work I thought that if some of the cases of seborrheic dermatitis and of eczema were due to acidosis it would be of value. We were disappointed at not being able to come to agreement with other writers in regard to this matter.

Correspondence

"THE NEED FOR THE STUDY OF RINGWORM IN AMERICA"

To the Editor:—In the April issue of the ARCHIVES appeared an editorial signed with initials, in the next to the last paragraph of which an unnamed investigator of ringworm fungi was contemptuously criticized. The account of this worker's career so accurately identifies a former assistant and collaborator of mine that no one who has known him can help recognizing that the attack was aimed at him. Indeed, a number of readers independently recognized him in the description and spoke to him about it.

Since this work is being done in my laboratory I feel that I should not permit the statements made in this editorial to remain uncorrected. The assertion that the work consists in the collection of cultures taken at random by a technician, from unrecorded cases, is quite at variance with the facts. The investigation was carefully planned after discussion with me. So far it has been confined to the study of a few type strains and their morphologic, biologic and serologic characteristics, in the hope of developing methods for the isolation and identification of other strains. The study of any large number of cases has not yet been attempted. The investigator assailed has had a great deal of experience in experimental work; he has published a considerable number of sound researches, and he has a well established reputation for conservatism and accuracy.

As for neglect of the morphologic features which was alluded to in a supposed quotation from me, I can only say that we still believe that, in a group as pleomorphic as these fungi, morphologic study alone will not lead to clearness. This, indeed, is one of the premises of the experimental plan which is being followed, and this opinion I dimly remember having expressed in ordinary conversation some years ago to the instigator of the editorial, although not in the peremptory form in which I have been quoted.

So much for the work. It is not my intention to burden your readers with an outline of prospective experimental work. The criticism of it and the language in which it is couched are particularly astonishing in view of the fact that neither the investigator himself, nor the undersigned has made any statements about it. No reports have been made at medical meetings, and no notes or papers have been published. The work has hardly been outlined, and the technic is in the developmental stage.

Although we, of course, are always willing to give any information in our possession to any one who comes to this laboratory, there has been so little definite progress in this particular work that no one outside of our laboratory group could possibly have any knowledge of the details. The person, who now admits responsibility for the information given to the writer of the editorial, has not to our knowledge been in our laboratory since this work was begun. The writer whose initials are signed to the editorial has never as far as we know been in the laboratory, is but slightly acquainted with the investigator in question, and is entirely unknown to the undersigned. In consequence, we are entirely at a loss to understand the reasons which could have induced an editorial writer to make a virulent attack on the unpublished work of an investigator of whose plans and methods he had no knowledge whatever.

This, however, is of secondary importance. I am writing primarily to correct the false statements regarding this work and the injustice done to the worker in question. May I add that when this or any other work is published from this laboratory, responsibility for its accuracy and for the conclusions drawn will be partly my own.

HANS ZINSSER, New York.

[COMMENT.—Of course, no one who knows Professor Hans Zinsser or his work can question the reliability of research carried on in his laboratory by an investigator with whom he collaborates, or whose work is conducted under his sponsorship.—ED.]

THE SPELLING OF DERMATOLOGIC WORDS

To the Editor:—One of your humble readers, and perhaps all of them, would like to know which is the proper spelling: leucoderma, leukoderma or leucodermia; leucoplacia, leucoplakia or leukoplakia; leucemia, leucaemia, leukemia, leukaemia or leucocythaemia? While awaiting your official decree the reader above referred to would beg to offer a few comments on the question, not of course with a view to influencing your opinion but merely for what they may be worth.

Uniformity in the spelling of medical words is extremely desirable but unfortunately there are no rigid rules to guide us and common usage is always arbitrary. The question might be correctly answered by quoting the statement of one whose name I do not recall: "You pays your money and takes your choice."

At present there is a tendency toward the curtailment of unnecessary syllables and the elision of diphthongs, which seems to meet with general approval. Anemia and anesthesia are regarded by many as far preferable to anaemia and anaesthesia. The latter spelling may be a trifle more correct, but is certainly less convenient.

The Greek letter kappa usually appears in English words as "c" and the tendency to substitute a "k" is worthy of consideration. Since rhinoceros and keratosis are both derived from the Greek κέρας (keras), a horn, it seems odd that one should be spelled with a "c" and the other with a "k." We spell them so not on principle but from habit. To spell leucoderma with a "c" and leukonychia with a "k," as some of our textbook writers do, is absurdly inconsistent. It is likewise inconsistent to spell leukocythemia with both "k" and "c." It comes from the Greek words λευκός (leukos), white and κύτος (kutos), a cell. If the former word demands a "k," why should not the latter? Consistency would seem to demand either leucocythemia or leukokythemia. But while consistency may be a jewel, it is one which cannot be worn on all occasions. This word might be dropped entirely as its synonym leukemia is shorter and preferable. White blood implies white cell blood.

While either "c" or "k," even used inconsistently, may serve to give us a useful name, I must confess that after changing my opinion several times my present preference is for "k" whenever it is merely a matter of choice. This letter has but one pronunciation which cannot be mistaken, while the letter "c" has two distinct pronunciations. Before "a," "o" and "u" it is like "k" (can, core, cut) and before "e," "i" and "y" it is like "s" (cell, cite, cynic). According to this rule, leucaemia would be pronounced lu-ke-me-a, while with the diphthong changed to "e," leucemia would be pronounced lu-se-me-a.

The Century dictionary gives leucemia, leucoderma and leucoplacia as the proper spelling of these words according to best usage. The Standard gives leucaemia and Webster leuchaemia. In such a matter dermatologists surely have rights which lexicographers are bound to respect. But unfortunately the former do not agree any better than the latter and scarcely two of our recent textbooks use the same spelling for all of these words. Why cannot the American Dermatological Association take up this question and for the sake of a desirable uniformity approve the use of "k" and the disuse of the diphthong or anything else which the members may prefer?

GEORGE HENRY FOX, New York.

Abstracts from Current Literature

STUDIES IN THE STANDARDIZATION OF THE WASSERMANN REACTION. VII. A STUDY OF THE NATURAL THERMOLABILE AND THERMOSTABILE HEMOLYSINS AND HEMAGGLUTININS IN HUMAN SERUM IN RELATION TO THE WASSERMANN REACTION. JOHN A. KOLMER, M. E. TRIST and A. M. FLICK, Am. J. Syphilis **4**:111 (Jan.) 1920.

This article, the seventh of a series by these authors on this subject, is summarized thus:

1. The natural hemolysins and hemagglutinins in human serums may be divided into two varieties, namely, the thermolabile hemolysins and hemagglutinins, those destroyed by heating the serums at 56 C. for thirty minutes, and the thermostabile hemolysins and hemagglutinins, those which withstand this exposure.

2. All natural hemolysins and hemagglutinins in human serums, with the occasional exception of antisheep hemolysin, are destroyed or inactivated by heating the serums at 62 C. for thirty minutes; immune hemolysins and hemagglutinins, such as those produced by injecting rabbits with human cells, are generally more resistant.

3. The thermolabile hemolysins and hemagglutinins in human serums for the erythrocytes of the lower animals are present in groups analogous to the groups of the isohemolysins and isohemagglutinins in human serums; for this reason percentages expressing the presence of natural hemolysins and hemagglutinins based on studies made with the corpuscles of a single animal of each species are only approximately correct.

4. Heating human serums at 56 C. for thirty minutes largely removes the group hemolysins and to a lesser extent the hemagglutinins; thermostabile hemolysins and hemagglutinins do not show the same tendency for grouping.

5. A large percentage of human serums contain a variety of hemolysins for erythrocytes of the lower animals; least is present for human cells, but for the cells of the sheep, ox, guinea-pig, dog, rabbit, rat, chicken and hog, thermolabile hemolysins are present in from 40 to 100 per cent. of serums.

6. Natural hemolysins in human serums for the erythrocytes of persons, rabbits, hogs, guinea-pigs and oxen, are largely of the thermolabile variety.

7. Heated human serums contain lesser amounts of natural hemolysins; that for sheep erythrocytes is most commonly present, being found in from 80 to 95 per cent. of serums; anti-ox hemolysin was found in from 5 to 30 per cent.; anti-guinea-pig hemolysin in from 20 to 25 per cent. and anti-human, anti-rabbit, anti-hog and anti-rat hemolysins in from 0 to 15 per cent. of serums.

8. Natural hemagglutinins in human serums are more resistant to heat than the natural hemolysins.

9. Although heating serums at 56 C. tends to destroy some of the natural hemagglutinins, heated serums yield a higher percentage of positive agglutination reactions than unheated serums due in part to the influence of hemolysins in the latter.

10. Thermostabile hemagglutinins were present in about 95 per cent. of human serums; named in the order of highest percentage present were the hemagglutinins for the erythrocytes of dogs, hogs, persons, rats guinea-pigs, sheep and chickens.

11. There is no relation between the occurrence of hemolysins and hemagglutinins in heated human serums. For example, 90 per cent. of serums contain agglutinins for rabbit erythrocytes and less than 2 per cent. contain hemolysins for the same corpuscles; from 4 to 80 per cent. of serums contain agglutinins for human cells and from 0 to 4 per cent. contain hemolysins. For sheep erythrocytes, however, conditions are reversed as from 80 to 95 per cent. of heated serums contain hemolysins for these cells and only from 4 to 36 per cent. contain hemagglutinins. There is likewise no relation between the occurrence of hemolysins and hemagglutinins in active serums; hemagglutinins for the corpuscles of certain animals of a species may be present and hemolysins absent, or the reverse may be observed.

12. In reference to the Wassermann and other complement-fixation tests, the presence of natural hemolysins and hemagglutinins in human serums are important in relation to the hemolytic system; theoretically at least the presence of a natural hemolysin for the corpuscles of the indicator antigen tends to disturb quantitative conditions in the hemolytic system and reduce the delicacy of the complement-fixation test, while an agglutinin may interfere with hemolysis, particularly with a low titer rabbit immune hemolysin and thereby interfere with the sharpness of the reactions. Judged solely on this basis, human corpuscles are best adapted for complement-fixation tests employing active or unheated human serums; with inactivated or heated serums, human or chicken corpuscles are best suited. Other factors, however, are to be considered before a decision can be made on the best hemolytic system for a standardized technic, namely, the actual rather than theoretic influence of natural hemolysins and hemagglutinins and practical means for overcoming their influence, the ease or difficulty by which immune hemolysins are prepared by injecting the corpuscles of persons and various of the lower animals into rabbits.

STUDIES IN THE STANDARDIZATION OF THE WASSERMANN REACTION. VIII. THE INFLUENCE OF NATURAL ANTISHEEP HEMOLYSIN IN HUMAN SERA UPON THE WASSERMANN REACTION. JOHN A. KOLMER and ANNA RULE, Am. J. Syphilis **4**:135 (Jan.) 1920.

The authors summarize the article thus:

1. The result of complement-fixation tests with strongly positive serums in amounts of from 0.1 to 0.2 c.c. and an antisheep hemolytic system are not influenced by the presence of natural antisheep hemolysins in the serums; however, serums containing relatively small amounts of syphilis antibody and large amounts of natural hemolysin may yield falsely negative reactions unless the natural hemolysins are removed. In a series of tests this occurred with from 3 to 5 per cent. of such serums.

2. If complement-fixation tests conducted with an antisheep hemolytic system are read immediately after the secondary period of incubation, the influence of natural hemolysins on weakly positive serums in producing falsely negative reactions is not as evident as when the readings are made after the tubes have stood in a refrigerator for sixteen hours or longer.

3. Quantitative complement-fixation tests conducted with varying amounts of patient's serum may be disturbed and rendered inaccurate by the presence of large amounts of natural antisheep hemolysin and particularly with serums containing small amounts of syphilis antibody.

4. While excessive amounts of rabbit immune hemolysin have no influence on the results of tests conducted with strongly positive serums used in amounts of from 0.1 to 0.2 c.c., four or more units of hemolysin may profoundly influence the results of tests with weakly positive serums and with strongly positive serums used in smaller amounts.

5. The removal of natural antisheep hemolysins from human serums by absorption with sheep corpuscles may render some serums slightly anticomplementary but these antilytic substances may be removed by heating the absorbed serums for ten minutes at 56 C.

6. Methods designed for adjusting the antisheep hemolytic system to the natural hemolysins in human serums in order to avoid an excess of hemolysin, have usually increased the delicacy of tests for syphilis antibody. New methods for this purpose are described.

7. The general conclusions of this part of the study are:

(1) The natural antisheep hemolysins in some human serums, and particularly in those containing small amounts of syphilis antibody, may influence the results of complement-fixation tests conducted with an antisheep hemolytic system and yield falsely negative reactions with a small percentage of serums.

(2) These natural hemolysins may be removed by absorption with sheep corpuscles or their influence minimized by special methods, and these means should be employed with practically all serums yielding doubtful or negative reactions to secure best results with an antisheep hemolytic system.

(3) The antisheep hemolytic system is not well adapted for a quantitative complement-fixation test based on the use of varying amounts of patient's serum.

TOMLINSON, Omaha.

THE CLINICAL FEATURES AND TREATMENT OF SYPHILITIC AORTITIS, GEORG HUBERT, Deutsch. Arch. f. klin. Med. **128**:317 (Feb. 18) 1919.

Basing his statements mainly on 220 cases of syphilitic aortitis observed in a Munich hospital during a period of five and a half years, Hubert states that with respect to the pathologico-anatomic changes that occur in this form of syphilitic infection there seems to be general agreement in all essential points, but that as regards the clinical features and the treatment to be pursued, there are wide differences of opinion. The syphilitic origin of the anatomic changes occurring in this type of aortitis has been shown by the discovery of typical gummatous nodular tumors in the media of the aorta. Reuter and Schmorl both found *Spirochaeta pallida* in the wall of the aorta, although, in spite of numerous investigations, their findings have never been verified. In 85 per cent. of the 186 cases in which the Wassermann reaction was taken the result was positive. Tabes was diagnosed in 25 per cent. of the 220 cases. Enlargement of the spleen was noted in 26 per cent. of the cases, which has therefore considerable diagnostic value. In sixty of the cases, the time of the infection could be established. In two cases the first subjective and objective symptoms appeared four years after the infection; in two other cases after five and six years, but in most cases the interval was

from fifteen to twenty-five years. The syphilitic infection dated back usually to the second or third decade in the life of the patients. Of the 220 patients, 168 were from 40 to 60 years old when the aortitis was diagnosed. Hubert opposes Jürgensen and also Grau, who place the infection of the aorta in the secondary stage of the syphilitic infection and assume a long period of latency, as he finds no basis for the opinion. Hubert found that syphilitic aortitis constituted 70 per cent. of all cases of syphilis of the thoracic viscera. The relation of the sex incidence of men to that of women was 2:1.

The clinical features depend on the seat, the extent and the severity of the pathologic changes. Early diagnosis is exceedingly important but unfortunately the first symptoms are not marked. In the advanced stages therapy is of little avail. The subjective symptoms are important, as on these often rests the diagnosis and the differential diagnosis with respect to arteriosclerosis. However, subjective symptoms may be entirely lacking, in which case, if the objective findings are positive, and there is a syphilitic history or a positive Wassermann reaction, a diagnosis of syphilitic aortitis should be made and energetic specific therapy should be begun, for it is mainly in such cases as this that there is a prospect of checking the progress of the disease. All subjective symptoms were absent in 35 per cent. of Hubert's cases. In the majority of cases the subjective symptoms are not only present, but even pathognomonic for the disease. Patients usually complain of an uncomfortable pressure beneath the upper margin of the sternum and of a feeling of oppression in the left thorax. In many cases a severe lancinating or burning pain is complained of, usually sharply localized back of the sternum at the level of the second and third rib. The pain is more or less constant but may be increased by physical exertion, rich diet or mental excitement. That the subjective symptoms occur only in complications, as maintained by Benary, Hubert asserts he has disproved by the necropsies of six patients who died of intercurrent diseases. All six patients had complained of severe retrosternal pain and dyspnea on exertion, and necropsy revealed syphilitic mesaortitis without complications. The origin of the pain in aortitis is still in doubt. Hubert assumes irritation of the nerves of the aortic wall. Nearly a third of the patients complained of dyspnea, especially after severe exertion, while a few presented digestive disturbances such as nausea and eructation, which were relieved by specific treatment. Pulsation of the neck vessels, so often mentioned by other writers, Hubert seldom saw. In 50 per cent. of the cases there was a slight enlargement of the heart to the right. Cardiac hypertrophy, though present in 17 per cent. of the cases, was due to renal complications and is not a feature of simple aortitis. Accentuation of the second aortic sound is present in almost all cases and is probably the earliest symptom of aortitis. Over the aorta a systolic murmur is usually heard. These two symptoms, in the absence of high blood pressure, point to syphilis or arteriosclerosis if thickening of the walls of the arteries, mental excitement and exophthalmic goiter can be excluded. Pulse conditions were normal. Blood pressure changes were not marked. Roentgenography, and more especially, fluoroscopy play an important part in diagnosis. In pronounced cases the aorta is distinctly lengthened and distended beyond its normal size. The roentgen findings may be classed among the early symptoms, but the recognition of the earliest pathologic changes in the appearance of the aorta requires considerable experience. If the dilatation of the aorta is not more than 0.5 or 1 cm., one is scarcely justified in speaking of a pathologic condition.

It is often exceedingly difficult and occasionally impossible to differentiate syphilitic aortitis from the arteriosclerotic form. The positive Wassermann reaction, the general condition of the patient and the subjective symptoms will usually be sufficient for differentiation. Aneurysms were present in 16 per cent. of the cases. Their cause is still unknown. In advanced cases the prognosis for recovery is bad, and for life rather unfavorable. If an early diagnosis is made the subjective symptoms can usually be relieved by specific treatment, but the objective findings are seldom much affected thereby. Hubert recommends salvarsan sodium in increasing doses (from 0.15 to 0.45 gm.), and states that frequently all subjective symptoms are relieved by one serial treatment during which from 4 to 4.5 gm. of salvarsan sodium are injected intravenously, but for a completion of the healing process it is necessary to repeat the treatment several times at three to four month intervals. In many cases the Wassermann reaction remained positive after repeated series of treatments in spite of the fact that the disease process had been checked or brought to a standstill. If a negative reaction has been secured by specific treatment and a later reaction is positive, treatment should again be instituted even though there is an absence of subjective and renewed objective symptoms.

H. R. W., Chicago.

PRURIGO EPIDEMIQUE CHEZ LES ASIATIQUES IMPORTES PENDANT LA GUERRE (EPIDEMIC PRURIGO AMONG ASIATICS IMPORTED DURING THE WAR). W. Dubreuilh, Ann. de dermat. et syph. **1**:13, 1920.

Dubreuilh says the importation of colonial workers gave opportunity for observation of a number of unusual diseases, either well-known tropical diseases, accidently imported, or diseases developing in Europe as the result of new living conditions. The cases which he discusses belong in the latter category, and were abundant in 1916, but had almost disappeared in 1917. The patients were all Annamites or Tonkinois, while other Europeans, the negroes, the Africans of the North or Chinese were not affected. The affected men were engaged in various occupations related to the war, and most of the Annamites affected were workers in shops making war materials, or were employed as hospital nurses.

The condition was surprisingly similar in all cases, and at first was considered to be scabies; but the clinical peculiarities, the appearance and distribution of developing lesions, and the failure to find the acarus ruled this out.

The eruption consisted of elevated lenticular papules, identical with those of prurigo and strophulus, and sometimes with a small elevation in the center. Scratched lesions developed a small crust, and disappeared in some days, leaving a brownish stain, sometimes with a central whitish scar. The lesions were always scattered and never grouped, involving especially the lower half of the trunk, particularly in the lumbar region, although they occurred on all parts except the face, hands, feet, genitalia and usually the flexures of the joints. In the intense cases the lesions might become confluent over the lower part of the trunk, leaving a marked, sepia-colored pigmentation. Itching was intense, and was present during the day as well as at night. Adenopathy was marked.

Hospitalization produced rapid recovery, and as a local application a sulphur ointment was used.

Senear, Chicago.

FURTHER OBSERVATIONS ON NEUROSYPHILIS AND THE PSYCHOSES. Lawson G. Lowrey, Arch. Neurol. and Psychiat. **3**:500 (May) 1920.

In this paper the author reports a series of nineteen interesting cases—fourteen of neurosyphilis, one a case of pseudoparesis, and four in which the physical and serologic findings were negative. The clinical symptoms in only four of the fourteen cases of neurosyphilis would justify a diagnosis of neurosyphilis.

The author states that in his opinion neurosyphilis occurs more frequently in association with paranoid psychosis than is usually recognized. Any type of abnormal mental state, or no abnormal state may occur with neurosyphilis. It does not follow that all such cases are paretic. Serologic findings may definitely increase under treatment, with or without increase of clinical signs.

He also says that a negative blood Wassermann reaction, or many such reactions, are not always conclusive evidence that the patient is not a victim of neurosyphilis, nor is a negative spinal fluid evidence of its absence.

He pleads for lumbar puncture in all cases which either present clinical signs of neurosyphilis or which present any atypical features, since neurosyphilis may exist in association with any type of mental symptoms, and since such states may exist without the signs and symptoms of neurosyphilis.

Neurosyphilis as a disease may exist for a long period before symptoms appear.

Oliver, Chicago.

LICHEN PLANUS. E. Graham Little, Brit. J. Dermat. & Syph. **32**:57 (March) 1920.

This article was published in full in The Journal of Cutaneous Diseases **37**:639 (Oct.) 1919.

A CASE OF RECURRENT ULCERATION OF THE SKIN CAUSED BY A DIPHTHEROID BACILLUS. H. W. Barber and F. A. Knott, Brit. J. Dermat. & Syph. **32**:71 (March) 1920.

Barber and Knott record their clinical and bacteriologic observations in a case of recurrent ulceration of the skin which they felt to be due to a diphtheroid organism whose characteristics place it near the upper, or Klebs-Loeffler bacillus, end of the diphtheroid group of organisms.

The active lesions which had existed for some days showed five distinct zones: (1) a red edematous area covered by unbroken skin; (2) a ragged, swollen, bluish-red edge; (3) a thick, yellow adherent slough; (4) a bright red raw surface, covered with granulations; (5) a healing surface with warty projections.

Therapy was unsuccessful until vaccines were used, but after an autogenous vaccine had produced healing, a large dose resulted in a recurrence, and since that time further employment of vaccines and antidiphtheritic serum has not proved efficient.

Senear, Chicago.

PUBLIC HEALTH ADMINISTRATION IN EPIDEMICS OF MEASLES. JOHN BROWNLEE, Brit. M. J. **1**:534 (April) 1920.

Children under 6 months do not readily take measles. The greatest susceptibility exists between the ages of 3 and 4 years. Brownlee is convinced that the children of a family are infected at the time the elder children first go to school, where in his opinion the fire of infection most often begins. The death rate between 6 months and 2 years is over 26 per cent., while between 5 and 6 years it is only 4.3 per cent., the average death rate for all cases being 9.1 per cent. In addition, the rousing of a latent tuberculosis is more common in the earlier years. The suggestion is made that schoolchildren in families where there are younger children at home, be sent among adults for the period of the disease rather than to their own homes.

Brownlee considers a rise in temperature nine or ten days after exposure for a single evening to 101, 102 or 103 F. with a fall to normal for from twenty-four to forty-eight hours as the first and most important of the early symptoms. Edema of the palpebral conjunctiva appears as the second symptom. Koplik spots appear late according to Browlee. Hospital care is advised for patients with severe cases and for the treatment of complications.

GOODMAN, New York.

PEMPHIGUS SUCCESSIF A KYSTES EPIDERMIQUES AVEC SYNDROME ENDOCRINIEN. SES RAPPORTS AVEC L'HEREDOSPECIFICITE. AMELIORATION PAR LE TRAITEMENT POLYOPOTHERAPIQUE (PEMPHIGUS AFTER EPIDERMIC CYSTS WITH ENDOCRINE SYNDROME. ITS RELATIONS TO CONGENITAL SYPHILIS. AMELIORATION BY TREATMENT WITH POLYGLANDULAR EXTRACTS). HUDELO and MONTLAUR, Bull. Soc. franç. dermat. et syph. No. 8, 335, 1919.

Hudelo and Montlaur describe a patient, 10 years of age, who had had an attack of a bullous eruption from time to time through a period of six years. The bullous lesions occurring on the hand and face spontaneously or as the result of pressure, were not inflammatory, and did not itch. Nikolski's sign was marked. The lesions on the hand left atrophic cicatrices with epidermic cysts. Symptoms suggestive of an endocrinous syndrome involving the suprarenals, hypophysis and thyroid glands were present. As the father had syphilis, and the patient dental stigmas and a questionable positive Wassermann reaction, antisyphilitic therapy was instituted but without result. Polyglandular treatment was then employed with striking effect.

SENEAR, Chicago.

A STUDY OF THE COLLOIDAL GOLD REACTION AND ITS CLINICAL INTERPRETATION. MARGARET WARWICK and CHARLES E. NIXON, Arch. Int. Med. **25**:119 (Feb.) 1920.

From their studies of this test the writers have come to the conclusion that it is the most delicate of the routine spinal fluid reactions, although careful technic is necessary in order to have the proper colloidal gold solutions. It is not to be regarded as a test to replace others but will supplement them as well as have its own value, especially so in the early diagnosis of neurosyphilis. Its supplementary value is especially marked in the various

curves which, however, are not specific in themselves as a provocative treatment, but may elicit a curve without other findings. Improvement clinically does not cause improvement in the gold curve although a nonsyphilitic patient has no curve. They state the following interesting conclusions: Clear-cut clinical cases of tabes dorsalis may show all the spinal fluid reactions both before and after treatment; a curve in zone III with a negative cell count and negative or faintly plus globulin is strongly suggestive of a brain or cord tumor or myelitis; curves in zones I and II may be found in nonsyphilitic conditions, such as multiple sclerosis and brain abscess; a cell count above 5 is pathologic. They believe this reaction should be made in all spinal fluid and neurologic examinations.

JAMIESON, Detroit.

DIEBETE SYPHILITIQUE ET GLYCOSURIE DE LA PERIODE TERTIAIRE (DIABETES AND GLYCOSURIA OF THE TERTIARY PERIOD OF SYPHILIS). V. CORDIER and DECHAUME, Ann. de dermat. et syph. **1**:17, 1920.

Cordier and Dechaume review the subject of the association of syphilis and diabetes and report two cases in which syphilitic patients developed diabetes many years after infection. As evidence of the fact that the diabetes was of syphilitic origin, they state that in these two cases the diabetes followed the syphilitic infection, the syphilitic manifestations otherwise were of severe types, the late syphilitic lesions and the diabetes appeared at the same time, increasing or diminishing with equal intensity, and the diabetes was cured by specific treatment alone.

They state that these findings, plus a failure of the diabetes to respond to the ordinary antidiabetic treatment, are necessary before one can say definitely that syphilis is the cause of diabetes in a case where these conditions coexist. The various ways in which syphilis may produce diabetes, and the prognosis in these cases are discussed.

SENEAR, Chicago.

LATE SYPHILIS OF THE RECTUM. CHARLES J. DRUECK, Am. J. Syphilis **4**:91 (Jan.) 1920.

Late syphilis of the rectum occurs as fibrous hyperplasia, ulcers, and gummas. The latter are usually multiple. Gummas do not form abscesses, but commonly break down forming ulcers and fistulas. The associated proctitis occasions a mucopurulent discharge and feeling of fulness in the rectum. Fibrous hyperplasia may diffuse through all of the rectal structures and lead to multiple ulcerations and fistulas. The pain in such instances is of a burning nature and may be marked.

The majority of nonmalignant strictures of the rectum are syphilitic.

Besides the specific treatment, the most important thing in the treatment of these cases is the prevention of septic infection.

TOMLINSON, Omaha.

LE POUMON DES PSORIASIQUES (THE LUNGS IN PSORIASIS). A. LÉVY-FRANCKEL and JACOB, Bull. Soc. franç. dermat. et syph. No. 8, 324, 1919.

Lévy-Franckel and Jacob examined by radioscopic means the lungs of fifty patients with psoriasis, and found the lungs normal in sixteen, while twenty-

seven showed definite tuberculosis lesions, and six questionable lesions. They do not affirm a toxi-infectious origin for psoriasis, but believe that a tuberculous soil is favorable for the development of the dermatosis.

SENEAR, Chicago.

A RAW SERUM WASSERMANN TEST EMPLOYING THE SHEEP HEMOLYTIC SYSTEM. J. J. SEELMAN, Am. J. Syphilis **4**:157 (Jan.) 1920.

The author's technic includes a preliminary titration to determine (*a*) the amount of native amboceptor in each serum and (*b*) the amount of guinea-pig complement to be added to each serum in order to have a standard quantity available for the test, the latter making allowance for the native complement.

These advantages are claimed: It employs noninactivated serum. A sheep hemolytic system is used. Native complement, native amboceptor and nonspecific fixation are allowed for; as a result amboceptor and complement are uniform for all serums in the final test.

TOMLINSON, Omaha.

NOTE ON THE "MONOBLOC" OPERATIVE TREATMENT OF TUBERCULOUS LYMPHANGITIS, W. SAMPSON HADLEY, Brit. J. Surg. **7**:324 (Jan.) 1920.

This article is of interest to the dermatologist because the author, after describing the operative treatment in a case of tuberculous lymphangitis associated with verruca necrogenica, states that in his opinion lupus vulgaris is essentially and primarily a lymphangitis of the cutaneous and subcutaneous lymphatics. He bases his belief on observations that the plane of the skin primarily affected (the superficial layer of the dermis) is the plane of origin of the lymphatics of the skin; that changes in the lymphatic vessels of origin can be seen beyond the clinical edge of the area of lupus; and that giant cells are often found in the subcutaneous tissue, usually close to the blood vessels in the situation of the comitant lymphatics.

If lupus is a lymphatic disease, the failure of treatment based on false pathology is not surprising.

SENEAR, Chicago.

A MORE RAPID AND IMPROVED METHOD OF DEMONSTRATING SPIROCHETES IN TISSUES. ALDRED SCOTT WARTHIN and ALLEN C. STARRY, Am. J. Syphilis **4**:97 (Jan.) 1920.

The authors give a detailed description of their technic which they say has these advantages: 1. Ordinary formol fixations will give good results. Alcohol fixations also succeed. 2. The sections can be stained singly, on cover-glasses. 3. The time is much shortened, three days being sufficient. 4. Results are more certain than with the Levaditi method.

TOMLINSON, Omaha.

THE HEMANGIOMA GROUP OF ENDOTHELIOBLASTOMAS. JOHN FRASER, Brit. J. Surg. **7**:335 (Jan.) 1920.

Fraser has studied a number of hemangiomas from the standpoint of origin, evolution, classification, and histologic characteristics, and concludes: 1. Hemangiomas constitute the most common variety of all tumors encountered dur-

ing the period of childhood. 2. The tumors are congenital in origin, arising in all probability from "rests" of embryonic vascular tissue. 3. The further development of the tumor leads to the formation of capillary, cavernous and compact varieties. 4. The tumor has striking powers of infiltration, and occasionally it may give rise to metastasis.

SENEAR, Chicago.

SYPHILIS AS A FACTOR IN ABORTION. DRS. DOUGAL AND BRIDE, Brit. M. J. **1**:540 (April) 1920.

Of 100 cases the Wassermann reaction was positive in twelve, but in half of these some other abnormal condition was present which might have produced the abortion. In only one case were clinical signs of syphilis present, and in no specimen could typical syphilitic changes or spirochetes be demonstrated. Cases in which syphilis produced the abortion are estimated at not more than 10, and probably nearer 8 per cent.

GOODMAN, New York.

INTRASPINAL TREATMENT OF NEUROSYPHILIS. G. MARINESCO, Rev. neurol. **26**:901 (Dec.) 1919.

Marinesco recites his results after six and seven years in fourteen patients with tabes or paresis whom he treated with salvarsanized serum. Three of the patients with paresis showed apparently good results. One patient, aged 35, served with efficiency as a physician during the war, but recently had a relapse and died insane. The other two patients, one a woman, and the other a man, are in good health eight years after commencing the treatment.

SENEAR, Chicago.

JUVENILE PARESIS. EDWARD LIVINGSTON HUNT, Am. J. Syphilis **4**:104 (Jan.) 1920.

The author believes there are many cases of juvenile paresis wrongly diagnosed as epilepsy or defective teething.

A complete case report is given with charts of the colloidal gold curve changes. It is shown that this test varies considerably from time to time and that a diagnosis should not be based on one curve.

TOMLINSON, Omaha.

BRANCHIOMES CUTANES BENINS (BENIGN BRANCHIAL CYSTS). J. DARIER and J. HALLÉ, Ann. de dermat. et syph. **1**:1, 1920.

Darier and Hallé review the different opinions as to the origin of branchial defects, and enumerate the various types of lesions. They report the case of a girl, 11 years of age, who presented a number of excrescences on the side of the neck which had been present from birth. These extended in a line from the ear to a point 3 inches above the inner end of the clavicle. There were about thirty tumors, some of them bearing a close resemblance to the lesions of molluscum contagiosum. A clear, viscous liquid could be expressed from some of the umbilicated lesions. Histologic examination disclosed malformations which were at the same time verrucous and fistulous, the latter openings leading to cavities with papillomatous vegetations. In diagnosis a linear nevus also had to be considered, but the fistulas ruled this out, while only multiple bronchial fistulas corresponded to the distribution and structure.

SENEAR, Chicago.

BACILLUS OF THE COLON-TYPHOID GROUP ISOLATED FROM A CASE OF FURUNCULOSIS. W. W. Oliver and Alma F. Schwab, J. Infect. Dis. **26**:336 (April) 1920.

As furunculosis is practically always caused by the *Staphylococcus aureus*, the authors report this case in which a member of the colon group of bacteria was isolated in pure culture from a case of the same.

The marked local and general reaction on the part of the patient following the initial injection of 1 minim of an autogenous vaccine, followed by the patient's freedom from boils for almost two years after the vaccine was administered, suggests a relationship of the bacillus to the disease.

Oliver, Chicago.

LESIONS HISTOLOGIQUES DANS UN CAS DE XANTHOME PAPULEUX GENERALISE (HISTOLOGIC FINDINGS IN A CASE OF GENERALIZED, PAPULAR XANTHOMA). L. Spillmann and J. Watrin, Bull. Soc. franç. de dermat. et syph. No. 8, 308, 1919.

Lesions were excised from a 9 year old boy who had generalized xanthoma. Specimens stained with an osmic acid solution showed that two types of fat were present in the xanthoma cells and in the tissue, the first type taking a heavy black stain and soluble in xylene, while the second was stained brownish, and was not soluble in xylene. The patient had a marked cholesterinemia.

Senear, Chicago.

THE USE OF THE PHRASE "WASSERMANN REACTION." John A. Kolmer, Am. J. Syphilis **4**:166 (Jan.) 1920.

Kolmer believes that the use of the term "Wassermann test" should be limited to the test as originally conducted by Wassermann; particularly so in that Wassermann still adheres to his original technic, including the use of salt solution extracts of syphilitic liver as antigen.

The author believes the term "test" should be used to designate technic and the term "reaction" to designate result but that they should not be used as synonymous terms.

Tomlinson, Omaha.

DEUX RECIDIVES DE CHANCRE SYPHILITIQUE DANS L'ESPACE DE SIX MOIS (TWO RECURRENCES OF SYPHILITIC CHANCRES WITHIN SIX MONTHS). Clement Simon, Bull. Soc. franç. dermat. et syph. No. 8, 333, 1919.

Simon's patient developed a chancre on the prepuce, and was given novarsenobenzol. Three weeks after the last injection another chancre appeared at the same site. He was again given the same treatment, but three weeks after the last treatment developed a third chancre. With the first lesion the Wassermann reaction was negative, and there were no other symptoms. With the second lesion he had adenopathy but the Wassermann reaction was again negative, and there were no other manifestations. With the third lesion adenopathy was present and no secondary phenomena.

Simon does not think that this case represents reinfection or a secondary chancriform manifestation, but a recrudescence in situ of spirochetes not destroyed by treatment.

Senear, Chicago.

PARAFFIN WAX FOR FIRST AID TREATMENT IN BURNS. J. R. GARRAND, Brit. M. J. **1**:339 (April) 1920.

The suggestion is made to use drippings from ordinary paraffin candles held about 10 inches from the burn as a first aid dressing. The dressing may be completed by putting a small piece of clean linen or absorbent cotton over the wax and dropping more paraffin over it.

GOODMAN, New York.

CHANCRE DE LA GENCIVE CHEZ UN EDENTE (CHANCRE OF THE GUM IN AN EDENTULOUS JAW). GASTINEL and LEGRAIN, Bull. Soc. franç. de dermat. et syph. No. 8, 311, 1919.

Gastinel and Legrain describe the occurrence of a chancre on the upper gum, an unusual location, in a patient who had no upper teeth. He worked in a shoemaking shop where it was the custom of the workmen to fill the mouth with nails, and then to put back in the container those not used. Infection apparently was due to accidental inoculation from this source.

SENEAR, Chicago.

RADIUM TREATMENT IN FIFTY CONSECUTIVE SKIN LESIONS. DEWELL GANN, Urol. & Cutan. Rev. **24**:136 (March) 1920.

As a result of his experience, the writer concludes that radium possesses a definite therapeutic value, and in dermatology it has one of its widest fields of usefulness. It is the method of choice in the treatment of epitheliomas of the skin, keratoses, nevi, pruritus, lupus and warts. It should not be used in the treatment of moles.

LEVIN, New York

SPOROTRICHOSIS. LEGRAIN and PELLIER, Bull. Soc. franç. de dermat. et syph. No. 8, 313, 1919.

The authors report a case of sporotrichosis in which a verrucous primary lesion developed on the nose following a slight injury. There was no local lymphangitis, but ecthyma like lesions were present on the extremities.

SENEAR, Chicago.

TUBING AS A CAUSE OF REACTION TO INTRAVENOUS INJECTIONS, ESPECIALLY OF ARSPHENAMIN; PRELIMINARY REPORT. JOHN H. STOKES and G. J. BUSHMAN, J. A. M. A. **74**:1015 (April 10), 1920.

The authors believe that in a certain brand of rubber tubing they have discovered a factor that will account for many of the reactions following intravenous medication: Their observations and experiments have resulted in these conclusions:

1. A certain widely distributed brand of so-called pure gum rubber tubing seems to contain when new, a toxic agent responsible for a definite type of reaction following the intravenous administration of arsphenamin, and possibly also of alkaline solutions and transfusion mediums.

2. The toxic substance gradually disappears from the tubing on use.

3. The toxic substance is apparently removable in the first instance by soaking the tubing for six hours in normal sodium hydroxid solution and rinsing.

4. The toxic property is not destroyed in the ordinary process of sterilization by boiling (from one-half to one hour), is not soluble in water or removable by irrigation, appears in toxic amounts in arsphenamin, neo-arsphenamin, and dilute sodium hydroxid solution merely passing them through a new tube en route from container to vein, and is not apparently associated with the mechanically removable debris from the inner surface of the tube.

5. The reaction induced by this agent, as obtained by the use of new tubing for intravenous injection of the substances mentioned, consists of chills coming on from thirty to sixty minutes after injection, with nausea, vomiting, diarrhea, a sharp rise of temperature, sweating, severe headache and lumbar cramps, emotional disturbance amounting at times almost to hysteria, and subsequent profound prostration.

6. The reaction can be induced in a typical form in dogs.

7. The identity and toxicology of the poisonous principle are under investigation.

WAUGH, Chicago.

DERMATITIS ARTEFACTA IN THE ARMY. HALDEN DAVIS, Brit. M. J. **1**:433 (March 27) 1920.

Davis says that there were few cases of artificial dermatitis in the British forces. He gives Burnier's list of diseases most commonly simulated.

Scabies was imitated by pricking the skin with a needle and rubbing in brine.

Pustular dermatitis was imitated by rubbing in croton oil.

Eczematiform dermatitis was imitated in various ways; sometimes substances were employed such as iodoform or mercury, which act by a special idiosyncracy well known to the malingerer. Other men, not provided with a special idiosyncracy to some drugs, employed ordinary well-known irritants, such as turpentine, petrol, sodium sulphate, etc.

Bullous dermatitis was often produced by the use of blistering plants, found especially among the Ranunculacae and Cruse feral. Chemicals were also sometimes employed.

Abscesses were produced by the insertion of thread, horsehair, or splinters into the skin, and the hypodermic injection of turpentine or petrol. The favorite site of injection was the back of the left hand.

Edema was produced by the use of ligature, usually a broad tape because it was less painful than a narrow one.

Bruises were often produced by repeated tapping with a hard object on the same spot.

The effort to gain a small pension may be the incentive for artificial dermatitis even now when the war is over.

GOODMAN, New York.

ERYTHEMA NODOSUM AND TUBERCULOSIS. E. WARD, Brit. M. J. **2**:811 (Dec. 20), 1919.

The author states that apart from the mere coincidental occurrence of erythema nodosum and tuberculosis, the condition has been recorded following an injection of tuberculin and under other circumstances in tuberculous patients.

He has also noticed erythema nodosum in tuberculosis when for some reason a chronic condition becomes more acute, or at the time when symptoms of tuberculosis first became noticeable in a patient under observation as a contact case.

Five interesting case reports are given, in all of which erythema nodosum occurred in patients having pulmonary tuberculosis. The author does not suggest that tuberculosis is the only cause of erythema nodosum, but merely that a similar cutaneous manifestation may be due to many different poisons, one of which is that of tuberculosis. The constitutional peculiarity which gives rise to this skin reaction seems to be inherited. In 4,000 cases of tuberculosis and contacts under annual observation, no other skin disorder definitely associated with tuberculosis was noticed, except the well recognized tuberculids. Only a few cases of lupus erythematosus were seen—not more than could be accounted for by coincidence.

WAUGH, Chicago.

COMBINED USE OF NOVARSENOBILLON AND MERCURY INTRAVENOUSLY. REGINALD JOHNSON, Brit. M. J. **1**:436 (March 27) 1920.

Johnson employs a mixture of 0.45 gm. novarsenobillon and 2 c.c. of a 1 per cent. solution of mercury perchlorid in a total of 6.5 c.c. injected by syringe intravenously. He says there are several advantages in this combined use of 914 and mercury given intravenously:

1. The mercury gets into the circulation.
2. The method is quick and time-saving as both drugs are given at the same time.
3. Lesions clear up more rapidly than when the drugs are used separately, that is, intravenously and intramuscularly.
4. Stomatitis has not occurred in 100 patients treated. These patients have all received seven injections with 8-day intervals between each injection.
5. In the 100 cases, only two instances of the Jarish-Herxheimer reaction were encountered.
6. At the completion of the course the blood was negative in 95 per cent. of the cases (old tertiary cases were not counted).

GOODMAN, New York.

THE BIOLOGICAL REACTION OF CARCINOMA CELLS PRODUCED BY RADIUM RAYS. THE TECHNIC OF RADIUM THERAPY IN GYNECOLOGY. HENRY SCHMITZ, Am. J. Roentgenol. **7**:1 (Jan.) 1920.

In this article, with its considerable title, the author does not always discriminate between scientific facts and hypotheses. An interesting discussion, however, is given. Selective absorption of various tissue cells for various rays is taken up.

"The degree of selective absorption of rays by the living cell depends on the particular phase of its life cycle, its species, as well as the age of the host whom it inhabits. Cell elements which are embryonal or undifferentiated are destroyed by a radiation which would cause only a slight reaction in the surrounding mature or highly differentiated cells. The basal cells of the epidermis and hair follicles, lymphoid cells and sex cells (as ova and spermatozoa), are readily killed by an amount of rays which would leave intact the neighboring mature cells.

"Remarkable examples of radio-sensitive tumors are ectodermal and basal-celled epitheliomata derived from the basal-celled layers of the epidermis, lymphadenomata originating from the embryonal lymph cells, sarcomata derived from embryonal connective tissue cells in which the connective tissue fibrillae, cartilaginous and osseous tissues have undergone re-absorption, fibromata in which the fibroblasts are present in large numbers and do not develop into highly differentiated adult cells, and connective tissue fibers.

"On the other hand squamous-celled epitheliomata, fibrosarcomata, chondrosarcomata, osteosarcomata, and fibromata in which atrophic fibroblasts and abundant fibrous tissue have been retained, are very refractory to radiation."

ELBERT CLARK, Chicago.

A CASE OF TUMOR-LIKE CHANCRE OF THE THIGH. A. M. H. GRAY, Brit. J. Dermat. & Syph. **32**:37 (Feb.) 1920.

Gray describes an unusual primary lesion in a girl, aged 20, who stated that this lesion began two months before as a small spot, which had slowly and regularly increased in size to its present dimensions.

On examination an oval swelling was seen on the front of the left thigh at the junction of the upper and middle thirds; it measured 4.5 by 3.75 cm., and was raised 6 or 7 mm. from the surrounding skin. The margin of the swelling rose abruptly from the skin, while the summit was hollowed out into a wide saucer-shaped depression, as shown in an accompanying photograph. Surrounding the base of the tumor was a sharply-defined, hard, collar-like band, about 1 mm. wide and of the same height; it was of dead white color. The tumor itself was of purplish color, was elastic to the touch, and had a glistening smooth surface except for a small area in the central depression, which was covered by a thin crust. There was no sign of moisture over the general surface of the tumor.

To judge by the literature, hypertrophic chancres are distinctly uncommon, especially when they attain such a size as in the case reported above. Ulcerating and fungating chancres of considerable size have been frequently described, but these smooth, dry, tumor-like chancres are apparently of much less frequent occurrence.

The character of the chancre is determined in part by two factors: freedom from damage to the surface and absence of secondary bacterial infection, and it is because it is so rarely possible to prevent these two accidents from happening that this type of chancre is so infrequent.

SENEAR, Chicago.

A METHOD OF TREATMENT FOR NEUROSYPHILIS. JOHN A. KOLMER, J. A. M. A. **74**:794 (March 20) 1920.

The author criticizes the Swift-Ellis system of intraspinal therapy of neurosyphilis because of the minute amounts of arsphenamin detectable, such as arsenic, carried over in serum secured by drawing blood one hour after the intravenous injection of arsphenamin. The objection is removed by the technic of Ogilvie, who adds arsphenamin, and by that of Marinesco, who adds neoarsphenamin, to serum *in vitro* prior to intraspinal injection; but in both methods the patient may be deprived of the beneficial effects of the intravenous administration of these drugs, which probably constitutes a valuable part of

the Swift-Ellis treatment. Kolmer uses a plan of combined mercury and arsphenamin treatment by which he believes these objections are corrected. The course of treatment covers a period of four weeks, during which twenty-four inunctions of mercury, 360 grains of potassium iodid and four combined intravenous and subdural injections of arsphenamin are given. The author gives a detailed description of the technic used in the combined intravenous and subdural injections which require two hours for the procedure.

The advantages claimed are:

1. The patient received arsphenamin both intravenously and intraspinally.

2. Blood is removed at once, insuring in the serum a larger amount of arsphenamin than is secured after an interval of an hour, as in the Swift-Ellis method.

3. Plasma or serum is secured at once, rendering the complete treatment possible within two or three hours instead of an interval of over night between the intravenous and intraspinal treatments.

4. The removal of from 20 to 30 c.c. of cerebrospinal fluid, followed by the injection of but 10 to 12 c.c. of arsphenamized serum, very probably leaves cerebrospinal fluid pressure reduced for some time, producing increased vascularity of the cord and probably also of the brain, with the beneficial effects ascribed alone to spinal drainage. Indeed, injection of arsphenamized serum within an hour of intravenous injection may increase extravasation from the meningeal vessels by reason of irritation produced by the serum and arsphenamin in the subarachnoid space, in addition to the increased vascularity and transudation ascribed to reduction alone of cerebrospinal fluid pressure.

5. The patient receives the benefit of treatment with mercury and iodids and of spinal drainage conducted while under the influence of these antisyphilitic medicinals.

WAUGH, Chicago.

SYPHILIS HEREDITAIRE ET DYSTROPHIES (Continued). V. HUTINEL and H. STEVENIN, Arch de méd. d. enf. **23**:77 (Feb.) 1920.

In this paper, Hutinel and Stevenin continue the discussion of the various dystrophies of hereditary syphilis, and a major portion of the article is given over to a discussion of the dystrophies of special parts.

They also consider the association of hereditary syphilis with other diseases. They have noticed that incidental infections or intoxications often excite latent syphilitic foci in certain organs. Conversely, they feel that the lowered resistance provided by syphilis often determines the localization of attack on certain organs, especially the brain, liver, pancreas and suprarenal glands, by such diseases as scarlet fever, diphtheria and typhoid fever.

They state that the effects of a chronic infection such as syphilis, can be intensified by an acute disease, and that likewise the acute disease may be given unusual severity in a syphilitic due to the presence of a chronic disease.

This reciprocal effect is most marked, however, when we have two chronic diseases occurring in a single patient. A patient with hereditary syphilis, acquiring tuberculosis, shows a particular tendency to develop sclerous lesions, and the lesions can be modified by specific treatment. Likewise, when a tuberculous patient acquires syphilis the tuberculous process is apt to become less severe.

SENEAR, Chicago.

TARDY OSTEOPERIOSTITIS WITH INHERITED SYPHILIS. A. Varisco, Riv. Crit. di Clin. Med. **20**:505 (Oct. 25) 1919.

Varisco reports a case in which inherited syphilis first manifested itself as osteoperiostitis at 20 years of age. The patient was an apparently healthy young woman. The history showed no illness, except a few convulsions in infancy, and measles at 18. There was nothing to suggest inherited syphilis in the case except the shape of the patient's teeth. At 20 she developed pain in the legs, and pain and swelling of the large joints, with a low fever; the spinal fluid was normal. After six months the symptoms subsided so that she could leave the bed. After a few months more painful nodes developed in the crest of the tibiae, in other long bones, and the clavicles. Nearly a year after the beginning of the illness, under a tentative course of mercury the diagnosis cleared up, previously negative Wassermann reaction became positive, and a clinical cure resulted.

Pusey, Chicago.

TOXIDERMITIS MEDICAMENTOSA. U. de Nonohay, Arch. Rio-Grandenses Med. **1**:21 (Jan.) 1920.

After a review of the accidents observed as a consequence of the injection of arsenic salts, the author refers to the disturbances of the internal secretions—especially of the suprarenals—which are perhaps produced by syphilitic infection and not by the arsenic, as has been suggested. He concludes that arsphenamin salts in the treatment of syphilis should be used with care, and epinephrin or several doses of mercury should be given before its injection. He does not believe that the reactions are due to impurities in the water or in the sodium chlorid of the normal solution used by some physicians, adding that impurities, if they exist, are negligible. He concludes with the statement that preparations of arsphenamin are always harmless if used carefully and after a thorough examination of the patient.

Pardo-Castello, Havana.

ZUR VACCINETHERAPIE DER FERUNKULOSE. Prof. Hans Schirokauer, Therap. d. Gegenw. **10**:397 (Oct.) 1919.

The author relates briefly his experience with, and opinions of, vaccine therapy in furunculosis. In acute staphylococcic infections the results of vaccine treatment have not been commendable; in obstinate chronic cases the results were highly favorable.

The best results were obtained in a series of nineteen obstinate cases. These were of from one to three years' standing and were contracted during the war. Most of the patients had had various internal treatment, including arsenic and yeast. Commercial vaccines were used. Injections were intramuscular; 100 million staphylococci were usually given at the first dose. If there was no reaction the treatment was repeated the next day. The injections were then given twice a week in increasing doses up to a dosage of 1,000 million. Sixteen of the nineteen patients have completely recovered; three are much improved.

Elbert Clark, Chicago.

PURPURA ANNULARIS TELANGIECTODES. Prof. G. Verrotti, Riforma med. **36**:145 (Feb. 7) 1920.

Professor Verrotti describes a peculiar case of Majocchi's disease confined to the hypogastric region, in a woman 40 years old. The cutaneous lesions

were discovered when the patient was examined by a gynecologist for an abdominal tumor which proved to be a fibroma of the uterus. The dermatosis was confined to those areas of the skin in which the nerves were irritated by the pressure exerted by the tumor. After the removal of the latter, the cutaneous lesions disappeared. The author thinks that the nervous disturbance caused by the tumor was the only etiologic factor in this case. He refers to another instance of the same disease in a woman 42 years of age who suffered from deficient ovarian secretion. Genital disturbances as possible etiologic factors should be kept in mind in cases of purpura annularis telangiectodes occurring in women.

PARDO-CASTELLO, Havana.

ALTERATIONS DES AMPOULES D'ARSENOBENZOL ET DE GALYL HUILEUSES ET GLUCOSEES POUR INJECTIONS INTRAMUSCULAIRES. F. BALZER, Bull. Soc. franç. de dermat. et syph. **7**:290, 1919.

Balzer states that the color changes taking place in oily and glucose preparations of arsenobenzol and galyl, designed for intramuscular use, do not as a rule indicate that the toxicity of the drug is increased, and he says further that preparations which have taken on a brownish color are less painful. He recognizes, however, that such color changes render the drug unsafe for intravenous use. Darier, in discussing the paper, summarized Balzer's statements well by saying that Balzer's communication does not prove that changes in arsenobenzol are unimportant but that the solutions are dangerous for intramuscular use.

SENEAR, Chicago.

THE EFFECT OF WEAK ACETIC ACID ON SPIROCHAETA PALLIDA. HERMAN GOODMAN, J. A. M. A. **74**:803 (March 20) 1920.

The author gives a preliminary report of the clinical and experimental evidence regarding the effect of weak acetic acid on *Spirochaeta pallida*. When using the solution to hemolize blood in the attempt to remove the spirochetes, the organisms were much changed, had lost their coil and were immotile. The author believes that the spirochete is unable to live in an acid environment and that such an environment might be of use in the prophylaxis of syphilis. He intends to carry on the investigations on animals, and to determine whether the acetic acid penetrates more deeply into tissue such as the mucosa than solutions of other local spirocheticides.

WAUGH, Chicago.

ACUTE SYPHILIS OF THE KIDNEY. H. N. COLE, Am. J. Syphilis **4**:46 (Jan.) 1920.

Acute syphilis of the kidney is a rare disease. Fournier's criteria for diagnosis were (1) proof of a recent syphilitic infection, (2) appearance of a nephritis with syphilis, (3) lack of other sources for the nephritis, (4) striking characteristics of a nephritis: (*a*) a high albumin content in the urine, (*b*) a rapid onset of the kidney disease, (*c*) a tendency to early uremia.

To these might be added (1) a positive Wassermann reaction, (2) weakness and loss of weight, (3) striking edema, (4) presence of spirochetes in the catheterized urine, and (5) influence of specific therapy.

The author reports a typical case which satisfies these demands.

Acute syphilitic nephritis is often fatal.

TOMLINSON, Omaha.

NEUROLOGICAL JOTTINGS. James Taylor, Brit. M. J. **1**:282 (Feb. 28) 1920.

Taylor reviews the interesting relation between herpes zoster and chickenpox, and gives the points common to all the cases of a series:

1. Chickenpox in one person followed shingles in another in the ordinary incubation period of chickenpox.

2. No other source of infection was discovered.

3. Chickenpox in a child followed an attack of shingles in an adult.

Shingles and chickenpox may coexist in the same patient, or cases of both in different patients living in the same house.

Goodman, New York.

CEREBRAL SYPHILIS. Luis Guedes, Arch. Rio-Grandenses Med. **1**:19 (Jan.) 1920.

Guedes presents a case of cerebral syphilis which had been clinically diagnosed as dementia praecox. On account of the age of the patient (36 years) the presence of gland enlargement and of increased patellar reflexes, several laboratory tests were made, giving a positive Wassermann reaction, both in the blood and the spinal fluid, moderate lymphocytosis and increased albumin. Specific treatment was instituted and the patient made an uneventful recovery.

Pardo-Castello, Havana.

MULTIPLE PIGMENTED HEMORRHAGIC SARCOMA (?); A CASE FOR DIAGNOSIS. E. G. Graham Little, Proc. Roy. Soc. Med. **13**: 13 (Dec.) 1919.

A gardener who had used an arsenical spray for many years presented a condition described as confluent telangiectases involving the dorsum of both hands and all of the palmar surfaces except a small patch in the center of each. The skin surface, being a deeply suffused brick-dust color, was smooth and unaltered. There was a distinct brownish pigmentation. The nails were thickened. Subjectively a burning sensation was noted. The diagnosis was in doubt, Kaposi's sarcoma, lupus erythematosus and an unusual type of arsenical dermatosis being considered. It was considered significant that other growers in the same district were reported to be similarly affected.

Guy, Pittsburgh.

ANAPHYLAXIS TO ACETYLSALICYLIC ACID. F. Widal and P. Vallery-Radot, Presse méd. **28**:93 (Feb. 4) 1920.

Widal and Vallery-Radot report an interesting case of cure of anaphylaxis by acetylsalicylic acid. The patient had suffered from the condition for nine years. The treatment began by the administration of the drug tonic in doses of 0.005 gm. at an interval of an hour, then at a similar interval 0.25 gm. twice and finally 0.5 gm. twice. This was repeated thirteen times in six weeks, the preliminary dose being increased from 0.005 gm. to 0.03 gm. A complete cure resulted.

Pusey, Chicago.

Society Transactions

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY AND SYPHILIS

Regular Meeting, March 2, 1920

JOHN E. LANE, M.D., *Chairman*

CULTURE FROM CASE OF RINGWORM OF THE NAILS. Presented by DR. HOWARD FOX.

Dr. Fox gave a demonstration of culture from a case of ringworm of the nails previously presented. The culture medium, 4 per cent. glucose agar, showed a trichophyton though the type could not be identified, as Saboraud's medium was not obtainable. The culture was made at the Laboratory of the Vanderbilt Clinic.

CASE FOR DIAGNOSIS. Presented by DR. WISE.

Harry M., from Dr. Fordyce's service, aged 51, single, was born in the United States, and stated that the duration of the condition was four years. There was a lesion on the flexor surface of the right index finger, between the first and second phalanx, which was crusted with a transverse rhagade about half an inch wide, showing a suspicious rolled edge. He had been treated with the roentgen ray about two years before. He gave a doubtful history of syphilis seventeen years ago.

DISCUSSION

DRS. HIGHMAN and PISKO thought the condition was epithelioma.

DR. TRIMBLE also regarded the ulcer on the finger as an epithelioma. He was, however, particularly interested in the keratosis on the palm and fingers and wondered whether the man had been taking arsenic in any form. He had previously observed an epithelioma developing on a keratosis produced by arsenic.

DR. MACKEE agreed with the diagnosis of epithelioma. There were numerous keratoses and small epitheliomas on the face and many keratoses on the hands. The skin of these parts was of the senile type. The general picture was that of a man who had an idiosyncracy to sunlight—sailor's skin.

DR. WISE said there had not been time to study the case but if anything definite was learned later the patient would be presented again.

HERPES SIMPLEX OR ZOSTER WITH PSORIASIS. Presented by DR. ABRAMOWITZ.

Vincent C., from the Vanderbilt Clinic, was 10 years of age. He was born in the United States and had had psoriasis on and off for seven years. The eruption exhibited on the right side of the face had been present for three

days and was preceded by pain in the left jaw, from which a tooth had been extracted. The eruption consisted of vesicles and bullae on an erythematous base, and covered the entire cheek, upper and lower lip on the left side.

DISCUSSION

DR. LEVIN said that in view of the fact that we are just passing through an epidemic of lethargic encephalitis, the boy should be watched for the possible development of that disease. Some cases of the disease appeared with neuritis and herpes as prodromal symptoms. There was also a history of nausea, vomiting and coryza occurring two days prior to the appearance of the herpes.

LYMPHO-GRANULOMA OF THE SCALP IN HODGKIN'S DISEASE.

Previously presented by DR. HOWARD FOX at the New York Dermatological Society, February 24. Diagnosis confirmed by microscopic report of DR. HIGHMAN.

DISCUSSION

DR. FRASER said that lesions presenting the typical picture of Hodgkin's disease were of rare occurrence in the skin. He believed that the majority of cases reported as such were lesions of the subcutaneous lymphoid tissues rather than of the corium. He had observed only one case in which the typical Hodgkin's lesion was present in the true skin. This was a case in Dr. Trimble's service at Bellevue Hospital. Sections taken from the skin showed in the upper part of the corium lymphocytes, large endothelioid cells, and a few of the large multinucleated cells which since the publication of Dr. Dorothy Reed's work have been regarded as the cell typical of Hodgkin's disease.

The case presented by Dr. Fox appeared to the speaker to be interesting from the standpoint of its analogy to mycosis fungoides. The dermatosis present resembled that found in the latter disease more than that described as usually occurring in Hodgkin's disease. He recalled a case of mycosis fungoides which he had reported a few years ago before the Section on Dermatology of the American Medical Association. In this case the skin lesions bore a striking resemblance to the histologic picture found in Hodgkin's nodes, and the picture in lymph nodes removed at necropsy might well have passed for the late sclerotic lesions found in that disease. It would be interesting to know the histologic picture in the present case, though of course absence of the typical picture in the skin would not exclude the diagnosis of Hodgkin's disease as the majority of dermatoses associated with the disease do not show the histologic features found in the lymph nodes. Gordon Ward, in discussing this subject at a meeting at the Dermatological Section of the Royal Society, referred to a typical case of Hodgkin's disease in which all the organs of the body except the skin presented a typical histologic picture.

In Dr. Fox's case the red blood count was practically normal. In Hodgkin's disease one would expect to find a picture of anemia. The case should be studied further and carefully observed, and sections of the skin should be studied histologically before a definite conclusion as to its nature could be reached.

DR. FRASER reiterated his conviction that the dermatosis in this case was not that usually found in Hodgkin's disease.

DR. HIGHMAN expressed regret at being obliged to disagree with Dr. Fraser. He had seen the patient in Dr. Fox's office by daylight. The condition impressed him then as being either a leukemia or Hodgkin's disease, unless it were a rare form of mycosis. In true mycosis, one would expect a history of a prefungoid rash. Mycosis did not involve the scalp as frequently as leukemia and pseudoleukemia. In fact, scalp and face involvement were among the recognized features of this disease, however rare.

Dr. Highman said that he thought the condition was probably not a mycosis. The question was whether it was a true leukemia in the aleukemic or subleukemic phase, or whether it was Hodgkin's disease. In discussing a group of which so little is known, it was difficult to express any strong convictions; nevertheless, based on the purely subjective foundation—which unfortunately was so common in dermatology—the case impressed him clinically as more likely to be the one of leukemia than mycosis. The report that the typical glandular structure of Hodgkin's disease was found supported that assertion. He had examined a piece of the scalp lesion at the Vanderbilt Clinic, and found "an infiltration filling the papillar body which could be separated into two elements; in one, surrounding the larger capillaries, are islands of pure lymphocytes, representing a local infiltration around the vessels; these lie embedded as islands in a more diffuse infiltration of larger cells which must also be classed as lymphocytes. There are a few eosinophils, and at least one example typical of the Dorothy Reed body."

These findings convinced him that the case was Hodgkin's disease. That the patient had a condition of lymphogranuloma was certain. It might be leukemia or mycosis, but his personal bias was in favor of Hodgkin's disease.

DR. TRIMBLE agreed with the diagnosis of the case as presented. As he recalled his own case, to which Dr. Fraser had referred, it did not resemble this one closely. The lesion was on the side of the neck and looked like the flat type of lupus vulgaris. It was deeply infiltrated and had a copper-colored hue. According to the patient's statement, the lesion began following the removal of a gland in the neck; and on examination it turned out to be of the same structure as a lymph node, so there was no doubt of its being a case of Hodgkin's disease of the skin. It was similar to a case reported in an article by Dr. Cole of Cleveland, who classified the lesions in two groups, the last group being the granuloma type.

DR. LEVIN said that the case reminded him of one shown by the late Dr. Gottheil from the City Hospital in 1915. The patient, Hugo Lutzenberg, presented a lesion on the scalp much like this one except that the skin was more edematous and elevated. Microscopic examination proved it to be mycosis fungoides. It was difficult to see how it was possible clinically to make a positive differential diagnosis between Hodgkin's disease, leukemia, mycosis fungoides and other allied conditions. In view of the microscopic findings in the case presented, he thought the diagnosis of Hodgkin's disease should be accepted.

DR. FRASER said that since Dr. Highman had explained the finding of the characteristic picture in the skin lesions he was willing to accept the diagnosis of Hodgkin's disease; the so-called Dorothy Reed cell was typical of the condition and, so far as he was aware, was not found in any other condition. He repeated, however, what he had said before, that typical lesions of the true skin are rare in Hodgkin's disease; and he believed that many of the cases that had been reported as nodules in the skin were not lesions in the true skin at all, but nodes of the subcutis. One of his own cases had

illustrated this point very well. The nodes in certain places were adherent to the true skin, but when removed microscopically they proved to be lymph nodes in which the normal architecture was replaced by the typical picture of Hodgkin's disease. The case presented by Dr. Fox was a most interesting one and should be recorded in the literature as one showing the typical Hodgkin's lesions in the skin.

Dr. Highman, referring to Dr. Levin's remarks, said that he recalled Dr. Gottheil's case. Although it was presented as mycosis, many did not accept it as such. As to differentiating among these cases, he wished to say that though the majority of observers find it difficult, few find it impossible. He referred Dr. Levin to articles by Arndt, Audry, Fraser, and Paltauf, which might point out to him that recognition of these maladies is not without the realm of possibility.

Dr. Fraser, in response to a request from Dr. Wise, drew a picture of the Dorothy Reed cell on the board and explained that it was a large cell, with sometimes only one, but in the majority of cases several, nuclei which are characteristic. These cells usually have pale staining nuclei with deeply staining nucleoli.

Dr. Howard Fox said that in Dr. Cole's paper, to which Dr. Trimble had referred, two classes of skin lesions were observed in connection with Hodgkin's disease. The first class included prurigo-like eruptions, urticaria, pruritus, pigmentation, and dermatitis exfoliativa, which were of an inflammatory nature and probably toxic in origin. The second class consisted of infiltration and tumor-like lesions which showed the definite histologic structure of a lymphogranuloma and were infrequently observed.

TINEA FAVOSA. Presented by Dr. Levin.

A boy, aged 7, born in this country, presented lesions of the scalp which had been present for more than a year. Covering the whole scalp, there was a thick layer of dirty yellow and grayish crust which was firmly adherent to the underlying inflamed scalp. The condition was most marked over the anterior two thirds of the scalp, on which were several irregular areas showing a loss of hair. A distinct musty odor could be detected. Mycelia and spores were present in the crusts and hairs.

MATCH-BOX DERMATITIS. Presented by Dr. Levin.

S. E., a married man, aged 45, a cloak-maker, presented himself two weeks before for treatment of a lesion which had been present on his left thigh for three months. It then covered an area about 5 inches in diameter on the anterior surface of the left thigh, corresponding to the region of his left front trouser pocket. The lesion was dark red, elevated, superficial, crusted, and vesicular. On investigation, it was found that he had for several years carried boxes of matches in the left pocket—never on the right side. There was no lesion on the right thigh. He was advised not to carry matches in his trouser pocket and was treated with Lassar's paste. When seen three days ago the eruption was practically gone, and he was asked to begin carrying matches in the trouser pocket again.

DISCUSSION

Dr. Williams said that it was a most interesting case, one that was not ordinarily observed, but that he had seen two such cases in camp in which the men carried their matches in the trousers' pocket and showed the same kind of lesions except that they were more papular and not quite so extensive. Both cases cleared up by the removal of the matches. It was an excellent illustration of the so-called eczema cases; the more we learn of them, the more eczema shrinks.

Dr. Highman said that he had seen other cases and that this one was typical.

MILIARY PAPULAR SYPHILID, ASSOCIATED WITH PALMAR AND PLANTAR KERATOMA. Presented by Drs. Chargin and Abramowitz.

A. W., aged 22, from the Chelsea Venereal Clinic, was a Canadian seaman who contracted a penile chancre about three months before, for which he received local treatment only. The eruption presented first appeared on his face ten days before and spread rapidly all over the body. The eruption on the face was an erythematous dermatitis involving the follicles on bearded and nonbearded regions, also the upper part of the neck. There was moderate scaling and smarting of the face was complained of. Fading macules were present on the trunk and extremities. The follicular eruption was mainly on the interscapular region, the outer ends of the extremities, buttocks and dorsum of first phalanges, and consisted of pinhead and larger papules, some with depressed centers, others capped with scales. The eruption on the hands bore a close resemblance to pityriasis rubra pilaris. There was a marked keratoderma of the palms and soles, in the former area being associated with erythema and minute papules noticeable at the edge of the lesion. The lesions on the hands and feet had been present as long as the patient could remember. The inguinal glands were markedly enlarged, but there were no mucous membrane lesions. In the intergluteal region was an eruption similar to that on the face, but about the size of a silver dollar. The Wassermann reaction was ++++.

DISCUSSION

Dr. Wise inquired whether the patient had taken either mercury or arsphenamin before the eruption appeared, and expressed the opinion that the lesions were not all syphilitic. The eruption on the back of the neck was not a follicular syphilid. It seemed that there were two rashes, a syphilitic one and a superimposed follicular rash of different origin, probably Devergie's disease.

Dr. Williams expressed his appreciation of an opportunity to see such a case. One noticeable feature was that a syphilid with papules so extensive as these should remain so pink; only three or four of the lesions had sunk to the ordinary brownish tint. It was a remarkable case.

Dr. Highman agreed with Dr. Wise that there were two conditions in the case, and expressed the opinion that one was pityriasis rubra pilaris of Devergie.

Dr. Howard Fox thought the entire eruption was syphilitic. It was similar to a case of miliary papular syphilid resembling pityriasis rubra pilaris that he had reported. Although he felt sure of the diagnosis of syphilis, he thought the lesions on the arms and hands imitated to an extraordinary degree the lesions of Devergie's disease, with the acuminate scaly papules and thickened palms.

DR. ABRAMOWITZ said that the eruption was a little brighter and more reddish than it was the day before when the patient was first seen. At that time, they were uncertain whether it was a purely syphilitic rash or a syphilitic rash accompanying some other condition. Some of the lesions on the face, back and extremities resembled a case of pityriasis rubra pilaris. The penile lesion had received some local treatment, but no arsphenamin was given. The eruption presented was of eight or ten days' duration. In the morning, the man had had his first mercury injection, and it had evidently irritated the lesions. The condition was probably syphilitic.

CHRONIC ECZEMA WITH LICHENIFICATION. Presented by DR. WILLIAMS.

I. H., aged 59, married and a novelty salesman, had applied for treatment at the Skin and Cancer Hospital. His previous and family history were negative, and the condition for which he was presented had lasted for six years. The flexures were first involved, the lesions being flat, shiny, skin-colored papules, with mild itching. Later the inner surfaces of the thighs and legs became affected, the eruption finally covering the whole body with the exception of the hands and feet. The lesions were essentially small flat or rounded, generally smooth, pale pink papules which showed marked excoriations resulting from scratching. There were also many enlarged sebaceous glands on the forehead and over the sternum. Pathologic report: chronic eczema.

PRURIGO NODULARIS. Presented by DR. WILLIAMS.

(Previously reported: *Jour. Cutan. Dis.* **32**:461, 1914; *Am. Jour. Med. Sc.* **150**:392 [Sept.] 1915; *Jour. Cutan. Dis.* **34**:380 [May] 1916.)

Miss S. O., aged 30, was of Swedish ancestry. There was nothing of importance in the family or personal history. The hair had always been thin. The skin was coarse and harsh and did not chap easily; it blistered easily from moderate heat, and developed callosities easily.

The present disease began in the summer of 1911 with a series of boils on the forearms and papules which itched intensely. Ordinary hives had not been noticed. The papules occurred on both forearms, hands, legs and feet, with a few scattered lesions on the arms and thighs. Lesions had been observed on the tongue. Lesions once formed persisted indefinitely and disappeared slowly or not at all.

DISCUSSION

DR. WILLIAMS said that these two cases made a good pair to two others reported by him some years ago and published in the *Am. Jour. of the Med. Sciences.* One man had a chronic pruritic condition of the skin; there had been no vesicles and no tendency to grouping, but the lesions were scattered diffusely and the itching was intense. The papules resembled lichen planus and were chronic itching papules, but the microscopic picture was not at all that of lichen planus. The condition was aggravated by scratching, and if that could not be checked the man would probably develop papules and nodules. There were already distinct patches of lichenification on the thigh.

The other patient with prurigo nodularis exhibited a leathery skin on the hands and forearms, but in this case the nodules came first and the itching later. In the man there might be a small nodule, but the itching came first, then he scratched, and later developed the nodules.

One condition was a pruritus which was scratched, the other an itching papule. Dr. Williams said that if any one could suggest a better name than chronic eczema or chronic pruritus for the first case, he would be glad to accept it.

Dr. Pisko suggested calling the first case eczema pruriginosum.

Dr. Howard Fox said he could not agree with Dr. Williams. If the lesions in this case were not more or less grouped, then his conception of the word differed from that of Dr. Williams. The patient presented a chronic, extremely itchy, relapsing eruption of papular lesions that in his opinion were grouped. He felt that the case could probably be classed as one of Dühring's disease. That there were no vesicles did not lessen the probability of this diagnosis, as many cases of this disease were of a papular rather than vesicular or bullous type.

Dr. Highman said he was less interested in the designation than in what caused it. One feature that had impressed him as interesting was that the man had general adenopathy. The old Viennese school recognized a type of preleukemic disease, prurigo lymphatica. It would be interesting to study this case clinically to find whether it did not prove to be a forerunning stage of leukemia.

Dr. Trimble expressed his interest in the case of the man and in Dr. Highman's statements regarding it. If the same lesions had occurred in a child of 6 or 7, most physicians would have said immediately that it was prurigo. He could not conceive of any one as old as this patient having prurigo. It would probably have to be accepted as a case of dermatitis herpetiformis of the papular type. He then recalled the case of a young woman of 18 who presented similar lesions that were pronounced to be prurigo; the patient asserted that she had never had any vesicles. The lesions were not grouped, though the condition had started at 6 and continued for twelve or fifteen years. While under observation in the City Hospital, she developed grouped vesicles, and a diagnosis of dermatitis herpetiformis was made.

Dr. Williams thanked Dr. Highman for his diagnosis of possible leukemia or pseudoleukemia, and was also pleased to have Dr. Fox's suggestion of dermatitis herpetiformis, though he could not agree with it. The lesions did not seem to show the close grouping, though they were thicker in some parts of the body than in others. The soft swelling of the skin and the congestion found in groups of dermatitis herpetiformis was not found and for that reason the diagnosis could not be accepted, although it had been considered. Whether the condition was called neurodermite or prurigo was largely a matter of words.

LUPUS VULGARIS. Presented by Dr. Bechet.

A woman, aged 48, from Dr. Trimble's service at the University and Bellevue Dispensary, stated that she had first noticed the eruption fifteen years previously. The entire forehead was covered with an infiltrated brownish red plaque, with here and there a healed scarred area an inch or more in diameter. This diseased area ended symmetrically at both temples. Over the nose and on either side of it, extending over the malar regions, was a more recent patch; this was also retrogressing over the nose, leaving an atrophic shrunken scar. At the periphery of this lesion were a number of papules and tubercles which on pressure with the diascope revealed the characteristic "apple jelly" nodules. There was some ectropion of the left eye. The patch occupied the "butterfly

area" of the usual case of lupus erythematosus, and being rather superficial bore a slight resemblance to the latter. The case was presented because of its unusual distribution.

BROMODERMA. Presented by Dr. Wise.

Mary G., 6 months old, was brought by her mother—who was free of dermatoses—to Dr. Fordyce's service at the Vanderbilt Clinic. The duration of the eruption was three weeks, previous to which the baby was given bromids for one week. On the scalp and gluteal region were pustular and papular lesions closely grouped, which formed a granulomatous mass about the size of a hazelnut.

LEPROSY (NODULAR TYPE). Presented by Dr. Wise.

Jeanette J., a widow, aged 55, was born in the United States and had always lived here. The duration of the condition from which she suffered was one year. The eruption consisted of nodular masses, split-pea and kernel sized, on the eyebrows and eyelids. On the trunk and extremities, dollar-sized depigmented and anesthetic patches were present.

ACNE VARIOLIFORMIS. Presented by Dr. Howard Fox.

A mulattress, 25 years of age, born in the United States, and married had an eruption that had been present on the forehead and scalp for the past eight months, and on the nose for the past three months. She complained of moderate itching. She had had no miscarriages, and the Wassermann reaction was negative. The eruption consisted of four groups of lesions, varying considerably in appearance and situated on the scalp, forehead, eyebrows, and nose, respectively. On the forehead, near the hair line, was a group of pigmented superficial varioliform scars, on which the diagnosis of acne varioliformis was mainly based. On the frontal region of the scalp there was an area about 3 inches in diameter, consisting of small, rough, pinhead-sized papular lesions. Near the left eyebrow there was a group of crusted lesions suggesting herpes zoster. On the right side of the nose was a group of pinhead-sized dull, reddish, firm, smooth nodules, suggesting syphilis, a tuberculid or iodism.

DISCUSSION

Dr. Highman said that the case interested him very much, though, except for the lesions on the forehead, it did not seem to him to be acne varioliformis. The group of fresh lesions on the nose strongly suggested a disseminated lupus vulgaris.

Dr. Williams said the case impressed him as acne varioliformis; the scars were typical and the chronic course sustained that diagnosis. As a rule, lupus vulgaris showed more general swelling, and would hardly present such distinct lesions and such small scars separated by normal skin. The scars were also very thin and soft, and there was none of the thickening one would expect in a disseminated lupus condition of the skin.

Dr. Howard Fox agreed with Dr. Highman that the lesions on the nose did not look like acne varioliformis, though the pitted scars on the forehead were perfectly typical of that disease. It was on account of the multiformity of the lesions that the case was presented.

GENERALIZED PRURITUS AND PIGMENTATION WITH HYPOADRENALISM. Presented by Dr. Levin.

B. P., a woman, 26 years of age, was born in Russia and had suffered from an intense pruritus for four years. Seven years ago the skin began to darken. She also complained of severe headaches, mental and emotional depression, and of fatigue. She had lost 30 pounds in seven years. Her urine was said to have contained sugar at one time, but she stated that she was then pregnant. She was married four years ago, had two healthy children, and had a miscarriage one year before. She was pregnant when presented. The menses were irregular, and painful, and the flow profuse.

The skin showed a generalized pigmentation and dryness. The increased pigmentation was most marked on the trunk. On the chest there were numerous areas of achromia which developed after scratch marks. The hair was dry. The nails were convex, dry, and showed pinpoint white spots and the presence of white crescents bordered distally by crescents of brownish-red color. Sergent's line was also present.

The patient's eye-slits were narrow and the pupils contracted, and increased lacrimation and salivation were present. The gag reflex was absent. The mouth temperature was 97.6 F. The blood pressure was: systolic, 96; diastolic, 64. The urine was negative for sugar, and no sugar was found in the urine after the ingestion of 100 gm. of glucose. The blood sugar was 0.1 and carbon dioxid 40.

GENERALIZED PRURITUS, PIGMENTATION, AND ECZEMA IN A PATIENT WITH ADRENALISM. Presented by Dr. Levin.

Y. Z., a woman born in Russia, aged 38, has been in this country for nine years. She had measles and typhoid fever in childhood and was operated on for an abdominal condition twelve years ago. Six months ago she was treated for tenia saginata, the diagnosis being confirmed by finding the ova in the stools. The menses began at 13, were always irregular, scanty, and accompanied by little or no pain. She was married fifteen years ago and had had five children, two of whom died from accidents. For the past six years she had suffered from pruritus which became very intense two years ago. She also complained of hyperidrosis of the flexor surfaces which appeared two years ago. She had had a recurrent evanescent eruption for six months, and patches of erythema with oozing for five months. For the past four months she had been having attacks of flushes followed by excessive perspiration. For two years she had been losing weight and strength and tiring easily; she had almost constant frontal headaches, a capricious appetite and marked constipation. She urinated every hour and had a loss of sexual desire.

The skin was dry, thickened, pigmented, roughened, and covered with follicular papules. The brownish pigmentation was marked on the trunk and was darkest along the axillary folds, the nipples, and the waist line. It was least noticeable on the lower extremities. There were patches of scaly, dark red, lichenified lesions on the face, the back of the neck, the upper extremities, and along the waist line. The hair was black, dry, coarse and thin, especially in the axillary and pubic regions. Sergent's line was present, and the hands were moist and cold. The eye-slits were unequal, the right being wider. The pulse rate was 72, and Aschner's sign was present. There was a systolic murmur at the apex which was not transmitted. The blood pressure was: systolic, 108; diastolic, 70.

Examination of the stools and urine gave negative results. Blood Chemistry: sugar, 0.08; carbon dioxid, 34; urea nitrogen, 0.15; nonprotein nitrogen, 0.28; red blood cells, 4,800,000; white bloodcells, 10,000; polyneutrophils, 64 per cent.; mononuclears, 35 per cent.; eosinophils, 1 per cent.; hemoglobin, 70 per cent.

ARSENICAL PIGMENTATION. Presented by DR. PAROUNAGIAN.

Mrs. D., had had one positive Wassermann reaction and had received one dose of neo-arsphenamin in the wards at Bellevue Hospital. Several weeks later she began treatment in the outpatient clinic. Following the third dose of neo-arsphenamin (0.54) she developed an exfoliative dermatitis on January 20, and when presented showed a pigmentation following the arsphenamin administration.

PIGMENTATION FOLLOWING ARSPHENAMIN. Presented by DR. PAROUNAGIAN.

Cornelia M., aged 24 and married, an Italian, had had four children, two of whom were living; one child had been born dead, the other died of pneumonia. Her father and mother were living and well. The rest of the family history was negative; the patient's previous history was also negative. Ten years ago she had a rash. When she first came to the Bellevue Clinic on Jan. 24, 1920, she presented a large mass in the upper quadrant of the abdomen. She was given three arsphenamin and two mercury injections, the third injection being given on Feb. 9, 1920. The next day she noticed a generalized itching and an eruption with marked pigmentation which remained until February 27. Neo-arsphenamin was used (m) 0.45 at each injection. On January 20, the Wassermann reaction was ++++; on February 24, +++. B. of H.

DISCUSSION

DR. WILLIAMS recalled seeing one of the patients who had a well marked and interesting case. She presented on the upper part of the neck a typical pigmentary syphilid, but there was also, all over the anterior surface of the trunk, a pigmentation which in appearance was identical with that on the neck. Pigmentation on the neck is a well-known symptom of syphilis; that on the body is said to be due to arsenic: Was it not possible that these two manifestations were due to the action of the syphilitic poison and of arsenic, respectively, on the suprarenal glands?

DR. WISE said that Dr. Williams' remarks led him to inquire whether these were arsenical melanoses, or pigmentation following arsphenamin injections. He did not know whether one could have a true arsenical pigmentation following arsphenamin. Was it a deposit of pigment from a previous dermatitis in a patient known to have had a skin eruption, or was it a true arsenical pigmentation?

DR. LEVIN said that no matter what the etiology might be the same factors were active in producing the pigmentation. Whether the poison be a mineral or some other exogenous or an endogenous toxin, the pigmentation results from the presence of melanophores which are called forth to destroy the toxin and improve the oxygenation of the tissues.

LUPUS ERYTHEMATOSUS. Presented by DR. LEVIN.

Mrs. B. S., aged 28, a native of Russia, was first seen about five weeks before presentation, when she applied for treatment of a scaly, pea-sized erythematous patch on the lobe of the left ear. It had been present for four months and had received no treatment. Under the application of astringent and soothing lotions and pastes, the condition would appear to involute but would then recur and slowly spread. The lesions presented on the cheeks appeared two weeks ago. The patient was a healthy person who exhibited a lesion on the lower third of the lobe of the left ear, an eruption dark-red in color, covered with fine adherent scales and showing beginning atrophy. On each cheek were two dark red, elevated tubercles, with scaling.

DISCUSSION

DR. HIGHMAN agreed with the diagnosis.

DR. WILLIAMS said that the patches on the cheeks at first thought suggested typical lupus erythematosus, but closer examination made that diagnosis seem doubtful. He did not believe that condition would produce such deep firm nodules as existed on the woman's cheeks—nodules of at least twice the diameter of the visible lesions.

DR. WISE spoke of the resemblance of sarcoid to nodular lupus erythematosus in some instances and the association of the two conditions, and thought it quite possible that a microscopic section of one of the nodules on the right cheek might present the appearances seen in the sarcoid of Boeck.

DR. FRASER hoped that Dr. Levin would settle the question of the diagnosis before the next meeting by injecting some of the material into a laboratory animal and by making an histologic section.

DR. MACKEE was inclined to regard the case as one of lupus erythematosus. The evolution of the lesion was rather rapid for sarcoid and, furthermore, the nodule gave the impression of being due largely to edema. Lupus erythematosus occasionally developed suddenly with the formation of edematous nodules. The speaker suggested this type of lupus as a tentative diagnosis.

LUPUS ERYTHEMATOSUS AND LICHEN SCROFULOSORUM OCCURRING IN A TUBERCULOUS SUBJECT. Presented by DR. MELLON for DR. THORNE.

Mrs. M. S., from Dr. Whitehouse's service at the Skin and Cancer Hospital, an Italian, aged 45, applied to the Outpatient Department for treatment, Dec. 23, 1919. At that time both cheeks and nose showed red scaly, slightly infiltrated lesions, and there were similar lesions on the margins of both ears. The redness did not disappear on pressure; there was no ulceration and no apple-jelly nodules. On removal, the scales showed keratotic spines which penetrated the ducts of the sebaceous glands. The condition had been present for about a year. The shoulders—especially the left—and elbows showed small, light-yellowish, lichenoid papules, some with slightly depressed centers and slightly scaly. This condition had been present six months. The physical examination showed an old tuberculous process in the left lung. The histologic examination of a papule from the shoulder showed: "In the upper part of derma are shown small scattered lesions 0.5 mm. in size, which are com-

posed of closely packed endothelial cells, plasma cells, small mononuclears and a few polymorphonuclears; there were a few giant cells found in examining several sections. The epidermis overlying the lesion is thinned or entirely destroyed, i. e., there is ulceration. Ziehl's stain for acid fast bacilli, negative." The seeming ulceration of lesions on the face was probably due to local treatment—eight applications of a mixture of lactic acid, 4 parts, and phenol, 1 part.

DISCUSSION

The consensus of opinion seemed to be that it was a case of lupus vulgaris. having been made.

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY AND SYPHILIS

Regular Meeting, April 6, 1920

JOHN E. LANE, M.D., *Chairman*

DYSTROPHY OF THE NAILS. Presented by DR. WISE.

A Greek, from Dr. Fordyce's clinic, aged 22, stated that the condition had existed for eight years. All the nails from the fingers and toes were almost obliterated. The patient stated that the condition began with the left thumb nail and spread rapidly to the others, including the toe nails. Examination for tinea was negative.

COLLOID MILIUM. Presented by DR. TRIMBLE.

The patient had been presented twice before. Microscopic examination had proved the condition to be one of colloid degeneration. Six radium exposures had been made, some of them lasting for an hour, with no benefit whatever. Formerly there were two or three lesions on the right side of the nose which were curetted and cauterized with good result.

CASE FOR DIAGNOSIS. Presented by DR. SCHEER.

The patient, Arthur L., aged 7, was from Dr. Fordyce's service at the Vanderbilt clinic. There was a history of a similar outbreak ten months ago, which lasted four weeks, and a second attack four months ago, which lasted ten weeks. The present outbreak had lasted one week. All outbreaks occurred in the same location, i. e., on the buttocks and extensor surfaces of both elbows. The lesions consisted of isolated and confluent bright red papules, varying in size from that of a pinhead to that of a split pea. The lesions did not disappear on pressure (hemorrhagic); some of them, especially the larger ones, had what looked like a central puncture. The mother stated that there was no itching or scratching. The child suffered from enuresis. He had taken no drugs except rhubarb and soda. Erythema multiforme was the most probable diagnosis.

DISCUSSION

DR. PAROUNAGIAN favored a diagnosis of erythema multiforme.

DR. TRIMBLE agreed with the diagnosis of erythema of a papular variety with hemorrhage.

DR. LEVIN said that this type of erythematous, papular eruption is seen in children who have frequent attacks of bronchitis and tonsillitis and are subject to prurigo. The patient had a history of tonsillitis, bronchitis and nocturnal enuresis, and showed only one testicle in the scrotum and an epigastric hernia. The case suggested some form of prurigo, and the patient would be benefited by small doses of the pituitary gland.

DERMATITIS PAPILLARIS CAPILLITII. Presented by DR. L. CHARGIN.

A man, white, aged 22, a chauffeur, had had the affection for two years. The condition began with the appearance of several small papules which gradually increased in number and size, and at the time of presentation covered the entire width of the upper neck at the hair border. There was no keloid formation.

VERRUCAE PLANAE. Presented by DR. MAX SCHEER.

D. M., a man aged 32 years, from the service of Dr. Fordyce, Vanderbilt clinic, born in the United States, and with no occupation, presented juvenile warts (verrucae planae) on the left side of the chin and neck. The first lesions appeared nine months before, and they attained their present number in one month, remaining unchanged until the time of presentation. The lesions were numerous and ranged in size from that of a pinhead to that of a split pea. They were identical with the flat warts so commonly seen in the young. The hands were not affected.

SYPHILITIC SERPIGINOUS ULCERATION OF HARD PALATE. Presented by DRS. L. CHARGIN and E. ABRAMOWITZ.

Joseph G., aged 30, contracted a chancre ten years ago, and received one injection of arsphenamin but no further treatment. The present lesion in the mouth began four months before presentation, and consisted of a superficial moth-eaten-like ulceration, involving the gingival border and adjacent area of hard palate, and was arranged in a serpiginous manner. The Wassermann reaction was ++++. The condition had improved under one injection of arsphenamin and two of mercury.

ROUND ATROPHY FROM SYPHILIS. Presented by DR. LEVIN.

M. Z., a man, a Russian by birth, was first treated at the Beth Israel Clinic six months before. He had a generalized eruption twenty-eight years ago, which was followed by the atrophic spots presented. Scattered over the trunk and extremities were numerous pea-sized to nickel-sized round, oval, and irregular depressed and level white atrophic spots. The Wassermann reaction was ++. Recently he had received eleven arsphenamin injections. Twenty-eight years ago he received twenty mercury inunctions and about a dozen injections.

DISCUSSION

DR. SCHEER suggested that a better name would be macular atrophy.

DR. HIGHMAN said he did not understand the title of primary atrophy. He had never seen a case of primary atrophy with the majority of the lesions showing scar tissue. When a syphilitic ulceration heals, it usually leaves an atrophic scar, or a light hypertrophied scar (keloid) or one level with the skin. All these first types of cicatrization were present. Primary atrophy leaves a spot in which it is possible, on palpation, to get a sensation of entering a hernial ring; and in this instance he had failed in any of twenty scars or lesions to elicit that phenomenon. On the contrary, in some of the scars he could feel no depression whatever; other scars were flush with the skin, and in others there was hypertrophied scar tissue; so that the case did not seem to be one of primary atrophy, but simply presented the three different types of scars following syphilitic ulceration. Primary atrophy can be recognized without doubt under the microscope, and the accuracy of Dr. Levin's conception must be decided in that way.

DR. POLLITZER said that the case impressed him as an atrophy and not as a scar. The normal fields of the skin were preserved over the lesions. He had examined only a few of the larger lesions and glanced over the rest without palpating or examining them closely, but felt convinced that it was really a case of atrophy. Dr. Levin would be able to correct him if he was mistaken in believing that the normal fields of the epidermis were preserved in all the lesions—the minute cuticular lines and even the indentations of the follicles.

DR. LEVIN said he had been observing the patient for six months and was positive that there had never been any ulcerations. The man volunteered the information that these white atrophic scars appeared after the secondary papular eruption. This was the fourth case of the kind he had seen and all showed similar lesions. He would excise one of the lesions and let Dr. Highman examine it. In his opinion, the atrophy depended on the degeneration of the elastic fibers of the corium.

ANGIO-KERATOMA OF SCROTUM. Presented by DR. WISE.

John L., aged 40, from Dr. Fordyce's service, was a native of France and a clerk. He presented on his scrotum a dozen pinhead sized, bluish-gray, soft tumors, isolated and not painful. They bled profusely when injured. He came to the clinic for scabies and did not know how long his scrotal eruption had been present.

DISCUSSION

DR. POLLITZER said that clinically the case did not present keratosis. He thought it was simply a case of so-called angioma—a telangiectasis affecting the scrotum, like the "ruby spots" seen on the trunk and extremities in old people.

ERUPTION AFTER ARSPHENAMIN INJECTION. Presented by DR. LEVIN.

M. F., a man, aged 47, was born in Ireland. Thirty years ago he had primary and secondary lesions of syphilis; at that time he received treatment of mercury by mouth for two years. During the past three years he has

received twenty intravenous injections of arsphenamin. After the last five injections a general erythematous eruption appeared, which gradually faded and disappeared after ten days. A week ago he received an injection of arsphenamin (0.4 gm.), and four hours later developed a general intensely itchy eruption, made up of bean-sized to quarter of a dollar-sized round, dark red macules. These gradually faded, leaving several patches which are dark red in color and scaly.

DISCUSSION

Dr. Highman said that the case was a curious example of what Homer Swift designates as an anaphylactoid reaction. He himself had never seen it until recently when a patient at Mount Sinai presented the lesions shown in Dr. Levin's patient. They appeared on the legs, and a few of them were twice the size of those in Dr. Levin's case. The patient also had varicose veins, but the lesions were above as well as below these. He had been at a loss to explain the condition, but the two cases were so similar in behavior and appearance that possibly a group of conditions will be observed determining a distinct classification of a type of arsphenamin reaction, or one favored by the influence of arsphenamin on the body.

Dr. Pollitzer said he had a case under observation which he had treated for several years. In the beginning the patient was treated rather energetically and had no cutaneous reaction until after he had received treatment for more than a year in courses of three injections in three days. But during the second year of treatment he developed these patchy erythematous lesions, and later became so sensitive to the arsphenamin that on the last few occasions the rash appeared while the injection was in progress. First it appeared on the lower lip and chin, the skin becoming edematous and red; then similar red edematous patches appeared elsewhere on the trunk and extremities. The edema subsided, leaving a dusky erythema with desquamation and ultimate pigmentation, which lasted about three months and was uncomfortably pruritic. The eruption cannot be grouped with the arsenic eruptions; it was not like the desquamative dermatitis after arsphenamin used not wisely but too much. It seems to be due to sensitization, and in that respect differs from the ordinary drug eruption. It is not manifestly due to the elimination of arsenic from the skin, but to a vascular or neurovascular disturbance in the skin. This patient in the last two years has not received more than one injection in a course, for fear of the effect of persisting in the presence of this eruption. Dr. Pollitzer said that his first case of this kind was in a tabetic patient who is now dead. The rash appeared on the side of the neck a few hours after the injection, and as he had been playing golf the day before and the patches were not definitely circumscribed, the diagnosis of dermatitis venenata, made by the patient himself, seemed probable; but subsequent injections proved that it was not dermatitis venenata but was due to the arsphenamin.

Dr. MacKee said he had seen a dozen examples of immediate eruption resulting from injections of arsphenamin, and had had patients so sensitive that the eruption would appear during the early stages of the injection. Usually when it occurred during or within an hour after the injection, it had been urticarial in type; when it appeared the following day it was of the erythema multiforme type. In most of the cases in which it seemed advisable to continue the treatment, neo-arsphenamin was used, and the patients tolerated that very well.

Dr. Highman said that this case might be subjected to some interesting experiments. If the injections of arsphenamin were made at suitable intervals, one done as a control without previous preparation, three weeks later another given after an injection of suprarenal gland extract, and still later another after atropin, as suggested by Stokes, some valuable data concerning the mechanism of the process might be gained.

Dr. Pollitzer, referring to Dr. Highman's suggestions for experimentation with the case, said that he had preceded the arsphenamin injection with an injection of epinephrin and atropin at different times without visibly influencing the occurrence of the rash.

Dr. Abramowitz said that Dr. Pollitzer did well in calling attention to the fact that the eruption was not a purely arsenic dermatosis. Antipyrin and phenolphthalein were capable of producing a similar eruption. Dr. Chargin had presented a case before this section which was produced by arsphenamin. Previous administration of epinephrin or atropin, or both, did not act as a preventive.

Dr. Chargin said that in conjunction with Dr. Goldenberg he had presented a patient before the section (May, 1919), who had developed an eruption after the seventeenth injection of arsphenamin. Prior to the eighteenth injection he received a dose of epinephrin hypodermatically without preventing a recurrence, and at a later injection atropin was given, also without any effect in preventing eruption. The patient was subsequently given additional arsphenamin injections in another service, receiving epinephrin before and atropin after the injection; but despite that an eruption followed. Dr. Chargin thought that neither epinephrin nor atropin had any effect in prohibiting these eruptions.

Dr. Levin said that he had seen several anaphylactic reactions from the drug, but this was the most intense eruption of all. Atropin and epinephrin should prevent the attacks as well as diminish the intensity in these cases; but both must be given in large doses. The best effect should be obtained by combining both. The eruption seems to depend on a disturbance of the vegetative nervous system and probably a vagotonia. The epinephrin acts by stimulating the sympathetic and the atropin by inhibiting the vagus.

Dr. Levin would test this patient and present him again.

MYCOSIS FUNGOIDES. Presented by Dr. MacKee.

Philip N., aged 55, a Russian who had been in the United States twenty-four years, presented himself at Dr. Fordyce's clinic with an eruption on the trunk and extremities of five months' duration. The lesions consisted of raised, circumscribed dark red patches, the size of a dime and a twenty-five cent piece, showing follicular involvement. The patient complained of itching. He denied any previous eruption. The Wassermann reaction was doubtful; the blood count normal. The biopsy report showed the condition to be mycosis fungoides.

DISCUSSION

Dr. MacKee said that there were several interesting clinical features. First, there was no preceding fungoid eruption; second, the lesions developed as a group of follicular papules—like a small papular syphilid. When the patient was first examined and photographed, there were several lesions in different stages of development, one of them a group of follicular papules surrounded

by erythema; a later stage showed infiltration together with the follicular element, and the latest stage showed a definite tumor. This was the only case the speaker had ever seen develop in this way.

DR. POLLITZER said that if it had not been stated that the histologic picture was definitely that of mycosis fungoides, he would have guessed that it was a case of leukemia from the appearance of the lesions. A positive diagnosis, of course, could be made from the microscopic appearance, but clinically it did not appear to him like mycosis fungoides, nor did the history as given by Dr. MacKee suggest that diagnosis.

DR. ROSEN said that the case did not tonight present the interesting features shown four or five weeks ago when it was first seen. At that time the patient exhibited nodular, soft lesions raised above the skin a quarter inch, resembling the soft nodules of lupus vulgaris. These lesions had entirely disappeared under radium treatment, and the patient now presented lesions on the back that were rather new—macular papules with distinct scales. At first the diagnosis seemed to lie between leukemia cutis and mycosis fungoides, or possibly a bromid eruption.

DR. TRIMBLE said that in his opinion, based on a cursory examination, the case did not bear any resemblance to mycosis fungoides clinically. The report of the positive pathologic diagnosis was quite surprising, and since it was not always possible to say absolutely whether a case was or was not mycosis fungoides from a pathologic standpoint, he thought further confirmation was necessary. Clinically the case resembled some form of cutaneous sarcoma; the widely scattered, dark blue, infiltrated lesions suggested that diagnosis. He would like very much to hear a further report on the case at a later date. If it were eventually proved to be a case of mycosis fungoides, then it would have to be looked on as one with extremely atypical clinical features.

DR. KINGSBURY said that the case was interesting and unusual, and he would not know how to classify it clinically. It did not look to him like mycosis fungoides, nor could he see any resemblance to a leukemic state. It demanded more observation than the arbitrary accident of a microscopic diagnosis.

SYPHILIS IN ASSOCIATION WITH PITYRIASIS RUBRA PILARIS.

Presented by DRS. CHARGIN and ABRAMOWITZ.

DR. CHARGIN said that S. W. was presented at the last meeting of the section, at which time a discussion arose as to whether the entire affection in the patient was syphilis, or whether we were dealing with a maculopapular syphilid in association with a pityriasis rubra pilaris—of both of which he seemed to show characteristic lesions.

The speaker said that there could be no doubt but that this patient showed typical syphilitic papules on his back when shown a month ago. They were pea-sized, shiny flat on top, bean colored, some with central depression and scaling; but in addition he showed follicular lesions scattered over the back, arms, neck and legs. Those on the back could easily fit into the picture of a follicular syphilis, except that they lacked the typical grouping. The lesions on the legs and hands fitted more closely into the picture of pityriasis rubra pilaris. The face showed a general infiltration in which individual papules could be made out, and which could readily be interpreted as a papular eruption "en nappe," and indeed this was the opinion of one of the discussers.

During the past month he had received five arsphenamin and six mercury injections with the result that the syphilitic eruption had entirely involuted, while the rest, although it showed some improvement, had for the most part remained. The speaker thought that it seemed to be clearly a case of syphilis in association with pityriasis rubra pilaris.

DISCUSSION

Dr. Abramowitz said that this was a particularly interesting case. It seemed to him that with the onset of the secondary stage of syphilis a coincidental eruption of what seemed to be a typical pityriasis rubra pilaris appeared. A section examined that afternoon conformed to that opinion. The eruption, especially on the face, had faded with four arsphenamin and five mercury salicylate injections. He believed there was no doubt of the association in this patient of pityriasis rubra pilaris and an early secondary syphilis.

Dr. Highman said that the case undoubtedly presented the two conditions as reported by Dr. Chargin, but that Dr. Abramowitz had evidently misunderstood his remarks concerning it. What the microscopic structure showed was merely an ordinary degree of hyperkeratosis with a dilatation of the blood vessels, which, however, were not increased in number. If there had been no hyperkeratosis and no dilated blood vessels, the tissue would have appeared normal. The picture was characteristic of nothing in particular, but was certainly not characteristic of syphilis.

Dr. MacKee expressed himself as still in doubt regarding the diagnosis in spite of having observed the case two or three times. The hands and forearms presented the picture of pityriasis rubra pilaris, but the follicular eruption on the body with the long spines resembled the so-called lichen spinulosus. Last month, the face presented a condition that one would not hesitate to call syphilis. The fact that the eruption on the face had disappeared suggested that the face eruption was syphilitic. In the speaker's experience syphilis "en nappe" did not disappear under vigorous antisyphilitic treatment as rapidly as did other syphilids.

Dr. Trimble said that the case undoubtedly bore a striking resemblance to pityriasis rubra pilaris. He wished, however, to direct attention to the fact that it also had some resemblance to Darier's disease (keratosis follicularis). The brownish granular condition around the temples covered with furfuraceous scales was a symptom seen in many cases of keratosis follicularis. The palmar keratosis would also fit in with such a diagnosis, though this latter symptom was also characteristic of pityriasis rubra pilaris. In nearly all cases of pityriasis rubra pilaris one or more large areas or plaques were usually observed; the case in question had no such large areas. The speaker said he was merely calling to mind a number of symptoms presented by this patient which would suggest keratosis follicularis; in all probability it was not that disease, as keratosis follicularis was comparatively easy to recognize pathologically; and since Dr. Highman had studied the slides it was not likely that he would have missed the so-called psorosperms.

Dr. Levin said that the patient showed over the left shoulder, arm and back, pea-sized to bean-sized lesions which had been formed by confluence of scaly papules and resembled lesions of psoriasis. Clinically the condition was pityriasis rubra pilaris in a syphilitic with dysfunction of the glands of internal secretion. The patient showed the female type of pubic hair, had long extremities with muscles which looked overstretched. A roentgenogram of the sella

turcica might show a large pituitary gland in a sella with changes, and the chest might show a large thymus. In his opinion, the skin condition depended on a further disturbance of the glands of internal secretion by the syphilitic infection. He suggested the use of glands in conjunction with antisyphilitic therapy.

DR. CHARGIN, referring to Dr. MacKee's remarks, said that if the entire affection were syphilitic in nature, one would have noted a more marked involution of the eruption in response to the treatment, as happened in lesions regarded as syphilitic. It should be borne in mind that pityriasis rubra pilaris is influenced by arsenic, and much of the improvement shown in the pityriasis signs must be attributed to that.

GUMMA AT SITE OF ORIGINAL CHANCRE. Presented by DR. L. CHARGIN.

A man, aged 35, gave a syphilitic history dating back to 1913, when he had a chancre with marked induration followed in due course of time by a secondary eruption. In that year he had received five arsphenamin and four mercury injections, but no further treatment to date. Two weeks ago he returned with a typically punched out pea-sized ulcer at the site of the original chancre. The history was that it began with a deep seated nodule which ulcerated. The last coitus took place more than four months prior to the development of the sore. The site of the ulcer was quite indurated. There was no inguinal adenopathy; the dark field for spirochetes was negative, as was the Wassermann reaction.

BASAL CELL EPITHELIOMA. Presented by DR. ABRAMOWITZ.

A young lady, aged 19, a native of the United States, who presented herself at Dr. Fordyce's clinic; had had the condition three years. There was a pea-sized, well defined lesion on the upper lip with a pearly border and depressed center. There was slight crusting and occasional bleeding. The case was interesting on account of the youth of the patient and the location of the lesion. The history was definite, and the lesion characteristic.

DISCUSSION

DR. WISE said that the patient was presented as an unusually interesting example of basal cell epithelioma appearing at the age of 19. There was no doubt of the diagnosis, as the lesion was typical in every respect.

NODULAR SYPHILID. Presented by DR. WISE.

A woman, aged 38, born in the United States, was under observation at the Vanderbilt clinic. The duration of the condition was two and a half years. There were several nodules on the nose which had ulcerated, the whole lesion being on an erythematous base. A year ago the Wassermann reaction was negative, and a week ago several Wassermann tests proved negative. Provocative treatment was being given, and the case would be reported again later.

The case was interesting on account of the duration—two and a half years—which would make the diagnosis of syphilid seem doubtful.

DISCUSSION

DR. POLLITZER said the lesions were not characteristic of lupus vulgaris. The fact that the process began in a woman during the fourth decade of her life spoke against tuberculosis, although not absolutely. The negative Wassermann test also spoke to some extent against syphilis—but the diagnosis manifestly rested between a syphilitic and a tuberculous process. On the whole, he was inclined to think that it was a syphilitic condition. The important factor against tuberculosis was the age of the patient, as that disease rarely begins so late in life. A negative Wassermann reaction with a single lesion of that kind meant little. In his opinion the patient should receive antisyphilitic treatment. A biopsy, unless extensive and disfiguring, would probably show nothing definite, unless the bacillus was found, which in cases of this kind rarely happens.

DR. KINGSBURY agreed with Dr. Pollitzer in regard to advisability of antisyphilitic treatment, but was inclined to think it was a case of lupus vulgaris.

DR. PAROUNAGIAN agreed with Dr. Pollitzer, and expressed the hope that after the patient had received arsphenamin and mercury injections she would be presented at the next meeting.

DR. WISE said that he should have stated in the history that the husband had active syphilis and was receiving treatment. The case would be reported in more detail at the next meeting.

NOTE: Further observation proved that the lesions were tuberculous.

LEUKODERMA SYPHILITICUM. Presented by DR. CHARGIN.

A mulatto girl, aged 19, gave a history of a sore on the genitals one year prior to presentation, followed by secondary lesions. At that time she received a number (eight or ten) of arsphenamin injections and mercury by inunction. When first seen ten weeks ago, she presented a papular eruption and leukodermatous areas, the counterpart of the lesion shown at the time of presentation. Under intensive antisyphilitic treatment (six arsphenamin and ten mercury salicylate injections in a period of seven weeks) the eruption involuted, leaving round and oval pea to five cent piece sized leukodermatous areas. The involution of the papules took place from the periphery toward the center, thus producing the depigmented areas. At this time she was discharged from the hospital. During the past two weeks the eruption recurred at exactly the same locations as the eruption of ten weeks before, and of the same character. At the time of presentation she showed an extensive papular eruption varying in size from that of a pea to that of a five cent piece and occupying the former leukodermatous areas. Some of the depigmented areas showed no papulation. The affection covered practically the entire body. In many instances the papules did not cover the entire depigmented areas, thus leaving a leukodermatous collar surrounding a papule. Mucous membranes were negative. There were no subjective symptoms and the Wassermann reaction at this time was negative.

DISCUSSION

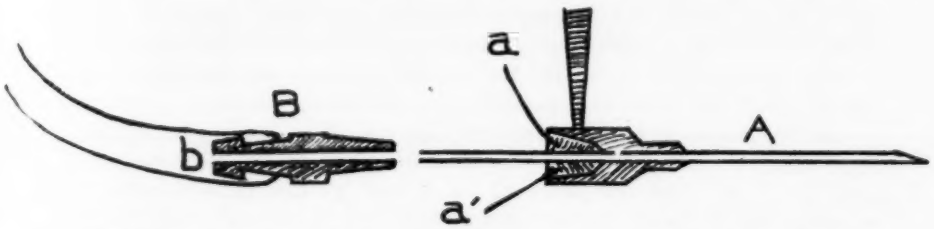
DR. CHARGIN said that it is usually accepted that the leukoderma which occurs in the course of syphilis follows in the wake of a formerly existing eruption either macular or papular. In a considerable number of cases in which particular attention was paid to this question, that did not seem to

be the case in the majority of patients. As a general rule, one usually sees a general pigmentation, especially of the neck and its adjacent area, in which in due time these round depigmented areas appear. The case presented was the first that he had seen in which a papular eruption was followed by a leukoderma.

DR. PAROUNAGIAN said that the race may have been responsible for the appearance of this case.

MODIFICATION OF THE FORDYCE NEEDLE. Presented by DR. ABRAMOWITZ.

Dr. Abramowitz presented for inspection a modification of the Fordyce needle that could be used for making a Wassermann test. By attaching a Luer adapter, arsphenamin can be introduced through the same needle. With the introduction of the needle into the constricted vein, blood comes out in a tubular stream into a receptacle. When the tourniquet is released only a few drops of blood escape before the adapter is applied if arsphenamin is to be administered. The field of operation is therefore quite clean.



Modification of the Fordyce needle. *A*, cross section of the needle; 18 gage, actual size; *a a*, groove into which Luer adapter slides; *B*, Luer adapter; *b*, rubber tubing.

SCLERODERMA; BAND-LIKE. Presented by DR. ROSEN.

Mrs. M., aged 26, born in Russia, gave an indefinite family history. The condition exhibited began about six years before with a hardening of the skin above the knee, which later extended upward and downward. About three months after the lesions appeared, ulcerations occurred within the hardened skin area. These were treated with ointment and radium. The patient presented a band-like scleroderma extending along the entire length of the outer side of the left leg, with smaller isolated morphea-like lesions.

DISCUSSION

DR. ROSEN directed attention to the purplish hue of the band, with perhaps a thinning of the subcuticular fat, and asked whether it might be a beginning acrodermatitis—chronic atrophy.

DR. LEVIN said he had some recollection of having seen this patient at the Post-Graduate Hospital, where she gave a history of having been treated for tuberculosis of the thigh. At that time she showed an irregular ulceration of the thigh with large scars and apple-jelly-like nodules. Dr. Whitehouse confirmed the diagnosis of tuberculosis.

CHICAGO DERMATOLOGICAL SOCIETY

Regular Monthly Meeting, March 17, 1920

CLARENCE BAER, M.D., *president, in the chair*

A CASE FOR DIAGNOSIS. Presented by DR. MITCHELL

A man, aged 41, presented a reteform telangiectasia, which had been present for two years, associated with marked dermographism. The telangiectasia was limited to the trunk and arms. The disorder came on gradually, and had remained stationary. There were no subjective sensations.

DISCUSSION

DR. WILE was impressed with the similarity of the condition to a roentgen-ray telangiectasia. Then he said that it might be an unusual form of urticaria pigmentosa. There were marked wheals, and considerable pigmentation. He found it hard to accept the case as angioma serpiginosum as described by Hutchinson and thought it belonged to an entirely different group. He could not satisfy himself that the section showed any marked degree of venous congestion under the microscope. He had no diagnosis to offer.

DR. COLE thought the condition was either angioma serpiginosum or urticaria pigmentosa. He was more inclined to the former diagnosis.

DR. MITCHELL called attention to the fact that there was a marked dermographism, and that the lesions were limited largely to the upper extremities and the trunk. The appearance of the lesions led him to believe that the disorder was probably angioma serpiginosum, but he was not sure that this was the correct diagnosis.

FOLLICULITIS WITH MARKED SCARRING OF THE SCALP. Presented by DR. MITCHELL.

A man, aged 30, had a scalp disorder of fourteen months' duration. When first seen there was a severe folliculitis of the scalp. The Wassermann reaction was positive and the patient was under treatment. The use of salicylic acid and sulphur ointment had greatly improved the folliculitis.

This man was exhibited for comparison with the patient shown at the January meeting with the convoluted lesions in the scalp.

DISCUSSION

DR. WILE recalled the fact that at the January meeting there was a discussion as to what cutis verticis gyrata was, and also as to the nature of folliculitis decalvans. He thought this case illustrated admirably how those two conditions could be confused in the same patient. The man had definite areas of alopecia following lesions which were undoubtedly folliculitis decalvans, and also had a condition on the back of the neck which was cutis verticis gyrata.

DR. COLE did not agree with Dr. Wile. He thought the whole picture could be put down as dermatitis papillaris capillitii, with scar formation which was limited to the base of the neck.

DR. QUINN said the lesions on the back were sebaceous and asked whether any of them had been opened.

DR. BAER agreed with Dr. Wile.

DR. MITCHELL said that when the patient was first seen he had marked pustulation, which had all cleared up. The case had been interesting to him on account of the discussion regarding cutis verticis gyrata, the patient shown in January and this man bore only a superficial resemblance to that disorder. The skin in these two cases did not have the feeling of the skin of a dog's back, and could not be lifted up. In cutis verticis gyrata the ridges are devoid of hair and the whole skin can be easily moved on the scalp, which was not true of either the patient seen in January or this patient. He thought the present case could be described as a severe folliculitis with a slight tendency to keloid. The long ridge at the occipital region was not a scar; there were scars on the vertex but no hypertrophy.

CASE FOR DIAGNOSIS. Presented by DR. MITCHELL.

A man, aged 32, had a lesion in the palm of the right hand, with an apparent fibrous ankylosis, due probably in great part to holding the hand in partial flexion to avoid the production of fissures. The lesion had been present for a year and had remained stationary. Apparently the patient had had dermatitis on the dorsal surface of both hands before the present lesion developed.

The lesion occupied the entire palmar surface and extended to the proximal phalanges. It was well defined, erythematous, indurated, keratotic and, in places, fissured. The fingers could not be completely extended either actively or passively.

DISCUSSION

DR. COLE said that the lesion was so sharply defined along the border that even if the Wassermann reaction was negative he would use antisyphilitic treatment.

DR. QUINN said the condition was unusual. The man's hand was crippled as if it had been held in the same position for a year or two, and he stated that it came from a single lesion which had gradually enlarged. He thought antisyphilitic treatment was justified.

DR. EISENSTAEDT thought the patient would have to be kept under observation for some time. The peculiar, sharp demarcation first suggested a parasitic involvement, although it was rather marked for a parasitic condition. He thought the reason the hand was held in one position was that it pained to extend it.

DR. BAER thought the man's ankylosis was purely functional. In spite of the fact that he had been doing the same office work for seventeen years, he believed it might have had something to do with his occupation.

DR. MITCHELL said he had seen a few cases which suggested this case. The patient was seen that day for the first time. There was no history of syphilis and the Wassermann reaction was negative, but the patient had immediately been placed on antisyphilitic treatment. Until it was demonstrated that the condition was not syphilitic, he would have to withhold a diagnosis. The patient would receive intensive treatment, and a later report would be made regarding the result.

URTICARIA PIGMENTOSA. Presented by Dr. Oliver.

A woman, aged 38, had an eruption which had been present for four years. It became worse when she was excited and at times typical wheals developed. The majority of the lesions were situated on the back, arms and chest. When she was nervous or excited, intense itching was present.

DISCUSSION

Dr. Mitchell said the question of urticaria pigmentosa would have to be considered. The adult cases he had observed, three in all, were somewhat different. The lesions were brown, rather than bluish-red, as in this case, and the lesions in those cases were somewhat better defined. There was urtication, but he could not determine whether it was limited solely to the lesion or not.

Dr. Oliver thought the case was one of urticaria pigmentosa. He had seen the patient twice. The history of definite wheal formation and the general appearance of the eruption at times led him to make the diagnosis of urticaria pigmentosa. A biopsy had been made and he would report the results later.

A CASE FOR DIAGNOSIS. Presented by Dr. Waugh.

A man, aged 45, had numerous subcutaneous tumors on both forearms and a few above the elbows. The disorder had been present for twenty years. The tumors varied in size from that of a hazelnut to that of a small hen's egg; they were rather firm, more so than usually found in lipoma, not painful, and the overlying skin was not discolored. There were many pinhead-sized scars on both forearms. The tumors were not in the usual location of enlarged glands and the lymphatics elsewhere showed no changes. No similar lesions were present on the body or lower extremities.

DISCUSSION

Dr. Wile thought it was impossible to say anything more about the case than that it was probably one of benign subcutaneous tumors. In all probability the tumors were neurofibroma, but it was absolutely impossible to diagnose them without a microscopic examination. They might well be neuroma, but most tumors of this kind are neurofibroma.

A CASE FOR DIAGNOSIS. Presented by Dr. Mitchell.

A man, aged 20, had a lesion on the right pillar, which had been present for one week. The Wassermann reaction was negative, as was also the examination for spirochetes. Little soreness was present. The patient had been sent in to be examined for syphilis. The last exposure occurred in January.

DISCUSSION

Dr. Cole thought it was a primary lesion of the tonsil.

Dr. Quinn believed it was a primary lesion, but the fact that the organisms had not been found under the microscope meant that the patient would have to be kept under observation for some time. He thought a diagnosis should be made positive before treatment was instituted.

Dr. Mitchell called attention to the fact that there was marked induration and that there was much difficulty in finding the organism in the mouth. He got three good preparations with no spirochetes in them. He could not

puncture the lesion or use a Wright pipet, and it was difficult to get material. There had not been time for the development of regional adenopathy. He assumed that it was a chancre and the patient would be given intensive treatment on this assumption.

Dr. Stillians thought it was wrong to give antisyphilitic treatment without a definite diagnosis and thought the man would be better off if they waited a few days. He would rather have syphilis than syphilophobia, and be under the shadow of having the disease when it did not exist.

Dr. Cole said that one of the best schools in the country advocated going ahead and treating such patients, but he felt that one would not be justified in giving treatment until a diagnosis was made.

Dr. Mitchell said that if the lesion were on the finger or the genitalia where it could be easily reached and punctured carefully without dilution by the saliva, diagnosis would be a simple matter. So far as he knew, he had never been unable to find the organism when a chancre was present. In this case the lesion was not on the tonsil but on the pillar; it had all the appearances of a chancre, and there was no soreness. If it was not a chancre, what was it?

Dr. Stillians believed a diagnosis of chancre could not be made from the clinical observation alone and that a diagnosis could not be made until other signs were present. He said care should be taken about starting a patient on treatment before a diagnosis had been made. He once had a canker sore on his tongue that was treated with silver nitrate and remained for a month. He showed it to the students as typical of chancre in appearance.

Dr. Lieberthal said that he would institute treatment without delay when life or important function was threatened by a suspicious lesion, even though the laboratory findings were negative. In this case he thought it would be more advisable to delay treatment.

Dr. Baer agreed with Dr. Mitchell that the patient should be treated vigorously, in spite of the fact that no spirochetes had been found.

PSORIASIS. Presented by Dr. Senear.

A child, aged 7 months, had been brought in with a diagnosis of napkin dermatitis. The condition began two months previously and had spread rapidly. Fungus examination was negative. The child had been seen but once, and since the last visit lesions had appeared on the side of the neck.

DISCUSSION

Dr. Wile suggested the diagnosis of psoriasis.

Dr. Cole thought it was a seborrheic eczema, which would probably develop into psoriasis.

Dr. Mitchell thought the diagnosis lay between seborrheic dermatitis and psoriasis. The child was very young to have psoriasis, but it might be that disorder.

Dr. Eisenstaedt said that cases of psoriasis had been reported at 6 weeks, and he had seen one case at 9 months. He thought that the lesions below the knee were typical of psoriasis.

Dr. Senear said that when he first saw the child the lesions were not nearly so profuse as they were at present. He had thought it was a fungus infection, with secondary dermatitis around the genital region, due in large

part to the napkin or urine. The next time he saw the baby the lesions on the neck had developed and he now believed it was a case of psoriasis. The lesions were more elevated, the scales were developing the silver color and had the distribution of the psoriatic scale. Examination for fungus had been negative and there was little greasiness of the scales.

ERUPTION ON LEGS. Presented by Dr. Oliver.

A girl, aged 2½ years, had an eruption on both tibial surfaces, which had appeared four months previously, one month after a severe attack of "stomach trouble." The disorder began as a clear spot which became indurated at the periphery as it spread. There were several spots on the tibial surfaces and one on the back. No subjective sensations were present.

DISCUSSION

Dr. Wile thought the case was unique. It was hard to get any idea from the lesions on the tibia as to exactly what the condition was. The lesions felt firm and hard and impressed one at first glance as the type of lesion found in erythema induratum or erythema nodosum, but they were painless and had a more doughy consistency than those lesions. On the back the lesion had the violaceous margin of a lesion which had undergone complete involution, and he believed the case was one of localized scleroderma.

Dr. Mackey suggested the diagnosis of erythema annulare.

Dr. Cole agreed with Dr. Mackey. There was a history of a contusion a few days ago, and he thought the bluish color on the back was due to the contusion.

Dr. Oliver said that there was no lesion in the lumbosacral region a week previously, but the mother told him the child had fallen against a chair a few days before. The only lesion present besides those on the legs was one in the center of the back. The lesion on the right tibia had enlarged and had a harder rim than when first seen a year ago. He thought it was a case of granuloma annulare and he would try to get a section and report later.

Dr. Baer believed it was a case of localized scleroderma.

SARCOID. Presented by Dr. Finnerud for Dr. Ormsby.

A woman, aged 24, who had been shown on several former occasions, was exhibited at this time with a histologic section showing characteristic sarcoid.

DISCUSSION

Dr. Eisenstaedt thought the lesions on the fingers were apparently an integral part of the condition, and while the cases of sarcoid were being divided into various groups, the case looked to him like tuberculosis on account of the finger lesions. He would feel much disappointed if tubercle bacilli were not found.

Dr. Finnerud said they thought the micro-organisms were there and they were making every effort to find them, but so far they had not been able to demonstrate any. A further report would be made later.

TUBERCULOSIS VERRUCOSA CUTIS. Presented by DR. STILLIANS.

A Jewish tailor, aged 52, who presented a lesion in the groin and anal region, in 1919 had had enlarged glands removed from the inguinal region. On presentation an ulcer about 3 cm. in diameter was seen in the furrow just posterior to the anus. Papillary projections which bled on slight provocation filled the ulcer. Large, separable, nontender glands were palpable in both axillary and inguinal regions and in the left posterior cervical triangle. Evidence of fibroid phthisis had been found in the patient's chest.

DISCUSSION

DR. EISENSTAEDT thought it was not tuberculosis verrucosa cutis, but tuberculosis vera cutis, or tuberculosis propia cutis.

DR. SENEAR did not think it was a verrucous lesion in any sense of the word, and suggested a diagnosis of tuberculosis cutis orificialis.

DR. STILLIANS thought the suggestions were very good. He had not been able to demonstrate anything in the pathology, but believed the man had tuberculosis. The glands that had been removed were probably tuberculous and he would make a further investigation.

LUPUS ERYTHEMATOSUS. Presented by DR. STILLIANS.

A German woman, aged 70, had always been well until one year ago when an eruption appeared on the forehead and rapidly increased. On the forehead were four small patches from 1 to 1.5 cm. in diameter, bright red and partly covered by large, adherent scales. Over both cheeks, extending down over the angle of the jaw, were similar patches with central scars. Small patches were present on the ears.

DISCUSSION

DR. STILLIANS believed the case was one of lupus erythematosus, developing at the age 69. It had spread so rapidly and had such a brilliant color that it seemed to him rather unusual. Most of the cases he had seen in old people had been lupus vulgaris erythematoides, but this was different.

ERUPTION ON SCALP. Presented by DR. STILLIANS.

A man, aged 33, an American, a mechanical engineer by occupation, had had an itching eruption in the scalp for the past five years, which got better and worse. Loss of hair began in 1917; there was considerable baldness at the vertex and on the sides in the frontal region. Scattered over the scalp were superficial pustules 2 to 3 mm. in diameter, some of them springing from apparently normal skin, others having an inflammatory base. Many of them had ruptured and a blood crust had resulted. There were few scars on the scalp and none on the forehead.

DISCUSSION

DR. STILLIANS said that Dr. Pusey maintained that the crusts found in pityriasis were due to scratching. This patient had an itching of the scalp with loss of hair and pustules appeared in considerable numbers at times. He could not find scars enough to make a diagnosis of acne varioliformis and believed the pustules were part of the picture.

ACUTE PSORIASIS. Presented by Dr. Stillians.

A man, aged 25, had had psoriasis several years ago which had cleared up. Following an attack of influenza several weeks before spots had appeared on the forearms, legs, and scattered over the body. The eruption consisted of small papules with a slight amount of scaling. On the face was a profuse eruption, dull, brownish-red in color, also with slight scaling, in patches forming a reticular network.

DISCUSSION

Dr. Quinn thought it was a case of psoriasis, with possibly some seborrheic element present. He suggested treating the face with sulphur ointment and thought chrysarobin should not be used at this time.

Dr. Senear agreed with Dr. Quinn. The patient presented the small type of lesions often seen in psoriatic cases that were borderline cases between psoriasis and seborrheic dermatitis.

Dr. Stillians said he showed the patient because he had not seen many cases in such an early stage and because of the marked involvement of the face. He asked for further suggestions as to treatment.

Dr. Senear thought the tendency of arsenic, when used in the early stages, was to bring out the eruption severely. He recalled a case seen with Dr. Wile in which a man had just begun to develop the disease and was given rather large injections of arsenic by his physician. Within two days he was completely covered with an eruption such as this man presented. This was not true in the later stages, of course, but he believed the patient would be harmed by arsenic at the present stage of the disease.

Dr. Lieberthal said that in his experience, when a generalized eruption occurred, arsenic worked like a charm. As this case had developed so acutely, he believed autoserum would be of great benefit.

Dr. Mitchell said that every one ridiculed the autoserum treatment, but he and Dr. Frost had seen a case recently which demonstrated either the capriciousness of psoriasis or the efficacy of autoserum—perhaps both. They gave a patient from out of town five autoserum injections and recommended chrysarobin, but the patient never had to use it. When he presented himself at the end of five weeks he was entirely cleared of all lesions. In his experience Dr. Mitchell found the first injections of autoserum of much value; after that they were of less value, and sometimes of no value. He was inclined to agree with Dr. Senear in regard to the contraindication of the use of arsenic in the acute exacerbation of psoriasis.

Dr. Baer said that several years ago he had four cases of psoriasis that, as far as he could see, were just about alike as regarded the conditions of the patients and the distributions of the lesions. He kept them under observation in a hospital and treated them with autoserum. They were given nothing but the injections; two cleared up nicely and the other two showed no effect.

BLASTOMYCOSIS IN A NEGRO. Presented by Dr. Zeisler.

A Pullman porter, aged 38, had an eruption on the neck which had been present for ten years. He had been treated at various times for syphilis, lupus and other conditions, with mercury and iodids. He had also received radiotherapy several years ago. He presented a verrucous patch with an

elevated border, and in the minute abscesses blastomycetes were found. Under treatment with iodid for the past six weeks, radiotherapy and copper sulphate locally, there had been marked improvement.

DISCUSSION

DR. LIEBERTHAL thought that the true aspect of the lesion had been completely changed by the treatment the patient had received. The center of the lesion looked like a necrotic radiodermatitis; he, therefore, advised against the further use of the roentgen rays.

DR. QUINN said he understood that blastomycetes had been found.

DR. COLE thought it was a case of blastomycosis.

THE CHICAGO DERMATOLOGICAL SOCIETY

Regular Monthly Meeting, April 14, 1920

WILLIAM A. QUINN, M.D., *Presiding*

LESION OF THE RIGHT PALM. Presented by DR. MITCHELL.

This patient was the man with the palmar lesion who was shown at the March meeting. The Wassermann reaction had been negative, but the patient had received two intravenous injections of arsphenamin and some radiotherapy. A Wassermann test made on the day of presentation was again negative. Marked improvement was apparent, but there was still definite evidence of fibrous ankylosis.

DISCUSSION

DR. FOERSTER had not seen the patient at the March meeting; at present the lesion was suggestive of a dermatitis factitia. There was sharp definition, with an appearance as if the lesion had been caused by some external irritant. He would not venture a diagnosis.

DR. WAUGH thought it was remarkable that the case had cleared up so extensively. He was interested to know whether the improvement was due to arsphenamin or radiotherapy.

DR. QUINN considered the case most interesting and believed the condition of the hand was due to the severe pain produced when the man attempted to straighten it. The lesion was sharply defined, which Dr. Quinn thought was suggestive of syphilis. The case showed that one should not depend too much on a negative Wassermann reaction, and he believed the improvement was due to arsphenamin and not to radiotherapy.

DR. EISENSTAEDT asked how one would account for the severe constant pain if the case was one of uncomplicated syphilis.

DR. MITCHELL said that in spite of the negative Wassermann reaction the patient had received two injections of arsphenamin and also five roentgen-ray treatments. Marked improvement was manifest after the arsphenamin treatment. He did not believe it was a trade dermatitis, for there was nothing in the patient's work to lead one to that conclusion. The finger was still fixed in ankylosis and he could not straighten it, although the skin was considerably softened.

Dr. Mitchell stated that the patient with the lesion on the pillar, also shown at the March meeting, had returned twice for examination, but no spirochetes were found. The lesion was about the same at the time of his last visit, after which he disappeared from observation and he had not been heard from since.

A CASE FOR DIAGNOSIS. Presented by DR. EISENSTAEDT.

A girl, aged 20, presented scaling areas of the skin of one year's duration. She was first seen five or six weeks before presentation, at which time there were scaling areas on the sides of the chin and a circular lesion on the neck. Erythema was present on the neck but not on the chin. The menstrual history was irregular with much disturbance at this time. Naftalan ointment had been used on the scaling areas and the patient had been put on corpus luteum in 5 grain doses four times daily. Marked improvement was evident. Repeated examinations for fungi had proved negative.

DISCUSSION

DR. LIEBERTHAL thought it was a simple seborrheic patch and said that he had seen numerous cases of this kind.

DR. SENEAR thought it was a case of seborrheic dermatitis.

DR. ORMSBY said that when he worked with Colcott Fox he was always calling attention to the early stage of seborrheic dermatitis as being what was ordinarily called "chaps." He had seen a great number of such patches on the face with little erythema and thought the lesion on the chin in this case was seborrheic dermatitis. The other lesion was either seborrheic dermatitis or a fungus infection. Dr. Eisenstaedt was well qualified to determine the latter condition and since he had said that no fungi had been found, the lesion was doubtless of the same nature as the other lesion on the chin.

Dr. Ormsby was not familiar with cutaneous lesions of this type produced by disturbance of the glands of internal secretion.

DR. EISENSTAEDT said he was glad to have the diagnosis made for him. He had placed the diagnosis of seborrheic dermatitis on the record, with a question mark. There was no eczematous character to the condition at any time and no greasiness of the scales. They were perfectly dry. He had given the patient a tube of lanolin and she had been taking large doses of corpus luteum for four weeks. The lesion on the chin had relapsed and the condition would probably have to be classified as seborrheic dermatitis, but it was not typical.

Regarding the glands of internal secretion dermatitis, some work was being done by the Swiss and Italians and Dr. Eisenstaedt thought that some of the findings in regard to malfunctioning of the endocrines would account for some of the hitherto unexplained dermatoses. He had once shown a girl of 23 who had not menstruated more than eighteen times in her life and who presented a typical dermatitis herpetiformis. Her condition afterward cleared up entirely on corpus luteum.

DR. QUINN recalled a case of lupus erythematosus in a young man who was treated by the late Dr. Zeisler, who used carbon dioxid snow on a patch about the size of a silver dollar. This afterward progressed and Dr. Quinn was consulted. He used radiotherapy for some time, without effect. The patient went to Michigan where he remained for some time and saw a physician there

who told him he did not know what the trouble was but he could clear up the condition, which he did by administering thyroid extract. The patient returned with the face clear.

DR. STILLIANS thought that in dermatitis herpetiformis suggestion was an important factor. The patient whom he had shown at the February meeting with the exfoliative dermatitis was put on thyroid extract and had improved somewhat.

SCLERODERMA. Presented by DR. LIEBERTHAL.

A man, aged 62, had suffered from eczema of the right leg for five years. In January, 1920, he contracted a severe cold and the leg began to swell and became red. On the advice of a physician he used hot applications of boric acid solution, which produced a burn. The burned area healed by the end of February, but the leg remained hard and swollen. The rest of the skin was normal.

DISCUSSION

DR. ORMSBY thought the induration was similar to that in a case in which the circulation had been interfered with. He had seen a good many cases of severe dermatitis with as marked induration which was due entirely to hypertrophy from poor circulation. The small lesions on top of the skin looked like hypertrophic sebaceous glands, which could be produced in the same way.

DR. EISENSTAEDT said he had interpreted the small, whitish elevations somewhat differently from Dr. Ormsby, although he thought the exciting pathologic process was rather similar. He thought it was hypertrophy of the lymphatics rather than of the sebaceous glands.

DR. SENEAR thought the underlying condition was scleroderma. He had been particularly impressed as the man walked out of the room. The lesions ran up the calf in a bandlike configuration. If the case was one of scleroderma the question of the hot applications was interesting, as it was known that trauma produced scleroderma in some cases. The verrucous lesions were circular and of sebaceous origin.

DR. MITCHELL said that he had seen cases in which a hard induration was present which was due in large part to disturbances of circulation. He had no opinion as to the verrucous lesions.

DR. LIEBERTHAL stated that the patient had an eczematous condition for four or five years and in January of this year contracted a severe cold, during which the leg became considerably swollen and reddened. His physician advised the application of hot boric acid solution and this was applied so hot that it injured the skin. Another doctor was consulted, who advised treatment for healing the burn—the burn healed in about six weeks, after which the leg took on the present appearance.

Dr. Lieberthal thought Dr. Ormsby's suggestion was a good one, but he could not reconcile himself to accepting the idea that the interrupted lymphatic circulation was able to produce such a hardening of the tissues in the space of six weeks. He thought the case could be interpreted in the beginning as one of trauma, added to a slight degree of scleroderma, and that the papillary lesions were the result of the burn. He would keep the patient under observation, try to secure a biopsy and present him again later.

DR. ORMSBY thought that if Dr. Lieberthal had not examined the patient just before the acute inflammatory condition appeared, he could not judge. Scleroderma rarely developed in that way; he had seen chronic eczemas that went on in that way for a long time. The edematous variety of scleroderma does not begin in a chronically inflamed area as a rule, but a chronic eczema of the leg could produce this picture readily, and he felt that this was the case.

DR. LIEBERTHAL thought if this was the case that some changes would be evident in the foot, but the foot was unchanged in any way.

DR. ORMSBY stated that he had said nothing about the lymphatics, but thought it was interference with the venous circulation that had produced the changes.

DR. EISENSTAEDT thought the question of the foot not being swollen was not vital, for the deep lymphatics might be unaffected even though the superficial ones were involved in the disturbance. The deep lymphatics might be draining very well.

ANGIONEUROTIC EDEMA. Presented by DR. EISENSTAEDT.

A colored man, aged 27, presented elevated patches on the shoulders and back and gave a history of their having appeared five days before presentation, following indulgence in shrimps.

DISCUSSION

DR. MITCHELL thought it was an angioneurotic disturbance of some kind.

DR. SENEAR agreed.

DR. ORMSBY said he had been seeing quite a number of cases of rather severe intoxication due to the administration of influenza vaccine, and asked whether the others had had the same experience. The cases begin as urticaria and some patients develop a severe dermatitis following the injection of the vaccine. It would be interesting to know whether there was any such history in this case.

DR. EISENSTAEDT said that it was difficult to get a history in the case. In addition to the lesions on the body there was a dermatitis papillaris capillitii (Kaposi) on the back of the patient's head.

A CASE FOR DIAGNOSIS. Presented by DR. EISENSTAEDT.

A colored woman, aged 52, with multiple tumors of the breast and of the scalp, twenty-five years ago had a small elevated growth on the right breast near the nipple, which was removed surgically. Ten years ago she noticed a tumor of similar character on the same breast, but not in the line of incision. She then noticed a tumor on the left breast and these have been followed by others on both breasts, lower abdomen and right side.

The tumors were reddish-brown, elevated, infiltrated and of various sizes up to 7 cm. in diameter. The initial lesions were round, dark brown, elevated and hard and seemed to spread peripherally, with central scarring. The Wassermann reaction was negative. Blood examination showed a normal picture, except 5 per cent. basophils. The scalp lesions were typical sebaceous cysts.

DISCUSSION

DR. LIEBERTHAL at first thought the case was one of scleroderma, but after examining the section, he was willing to accept the diagnosis of granuloma annulare.

DR. STILLIANS had thought of fibromas, but the clinical picture was not that of fibroma and on seeing the section he favored granuloma annulare, but was troubled by the pigmentation of the lesions.

DR. MITCHELL agreed with Dr. Stillians that the pigmentation was unusual. It was not the picture of granuloma annulare that he had studied histologically, but it fitted in with that described by Little as a keloid-like lesion.

DR. SENEAR said he was unable to arrive at a diagnosis clinically but under the microscope he thought it was a case of granuloma annulare. He was not very familiar with this condition in the white race and not at all in the colored. Many disturbances took on increased pigmentation in the colored race, and this would not rule it out.

DR. ORMSBY agreed with Dr. Senear.

DR. EISENSTAEDT said the case would have to be considered one of granuloma annulare. The chief point was the absence of necrosis microscopically in any part of the lesion.

ALOPECIA. Presented by DR. SENEAR.

Two Jewish brothers, aged 20 and 24 years, respectively, presented patches of baldness and stated that a brother and sister were similarly affected. The bald patches in the sister were first noticed at the age of 8, after which they were not so pronounced, but four years ago began to reappear. There was only one spot of baldness in each patient, and these were of recent origin. Before any local application was made they presented the usual appearance of alopecia areata, but one had been considerably changed by the application of Cutler's fluid. The bald spots had first been noticed a month before presentation, but the younger brother stated that a picture taken twelve years previously showed a bald patch.

DISCUSSION

DR. MITCHELL said that one or two hairs in the area on the right temple in one of the cases suggested the exclamation point, which was found in alopecia areata. The lesion in the other case might have been alopecia areata in the beginning, but it now appeared to be permanent alopecia. There was no evidence of scarring. He believed it was quite unusual to find so many members of the same family attacked with the same type of alopecia.

DR. QUINN said that he had three cases in the same family, all in grown married sisters and brothers. In the youngest of the sisters the hair had all returned, while in an older sister the condition had gone on to total alopecia and a brother had lost about half of his hair. They lived in different parts of the city.

DR. SENEAR stated that he first saw the case at the dispensary on Saturday, four days before presentation. At that time the young man stated that the patch had been present only three weeks and he painted the spot with Cutler's solution. He afterward brought his brother in and his scalp also showed the typical alopecia areata; Dr. Senear was then told of the sisters being similarly affected. He thought they were both cases of alopecia areata and presented the patients because of the occurrence of so many cases in one family.

A CASE FOR DIAGNOSIS. Presented by Dr. Stillians.

A colored man, aged 32, presented multiple tumors which were slightly painful. About six years ago the patient had a generalized itching which responded promptly to treatment. Seven months ago he noticed a few nodules on the arms and scrotum. Four months ago two injections of arsphenamin were given, after which nodules became more pronounced and increased in number. The Wassermann reaction was negative.

The lesions consisted of multiple circumscribed nodules and plaques on the face, arms and hands, with smaller lesions at the nasolabial folds, angles of the mouth and on the chin. In addition to these, there were deeper hard nodules which were especially noticeable in the masseter muscles and around the wrists.

DISCUSSION

Dr. Lieberthal suggested a diagnosis of lichen planus hypertrophicus.

Dr. Ormsby thought the lesions looked more like tumor formation than lichen planus. The section under the microscope showed a well-defined new growth.

Dr. Senear said that the lesions on the arms in combination with the microscopic picture were more nearly subcutaneous sarcoid. There were giant cells in the section.

REPORT ON MISCELLANEOUS CASES.

Dr. Stillians reported on the case of recurrent psoriasis shown at the March meeting. He had put the patient on Fowler's solution and he had improved. He thought perhaps the fact that the lesions were not irritated by the chrysarobin would indicate that it was not such an acute eruption as was suspected, and that it would not be injured by the arsenic.

Dr. Senear said the baby with psoriasis showed marked improvement. The picture offered nothing new in the way of diagnosis and he still felt that it was psoriasis.

The young woman shown by Dr. Stokes at the January meeting with the numerous keloids had been kept under observation. An old record of her had been found in the office; she had been seen eleven years ago when a diagnosis of questionable pemphigus was made. A month ago she had a typical dermatitis herpetiformis, with bullous and papular lesions. When she was seen eleven years ago there was only one keloid present, in the scapular region.

Dr. Eisenstaedt asked whether the cases of eczema seen since prohibition went into effect were more frequent among men than before. One of his patients, who was accustomed to having several highballs a day, was eating huge quantities of sugar in candy, one-half to one pound a day, and presented himself with a pronounced eczema and much sugar in the urine. After prohibiting the candy the eczema cleared up.

Dr. Foerster thought there has been an increase in the cases of furunculosis. These patients had been taking larger quantities of sugar than usual, which was of interest in connection with Dr. Schwartz' recent work.

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, March 23, 1920

GEORGE M. MACKEE, M.D., *President*

POWDER STAINS TREATED BY CURETTING. Presented by DR. HOWARD FOX.

E. P., a business man, aged 41, on Armistice Day (fourteen months ago) accidentally had a toy cannon discharged within 3 feet of his face. When first seen (two weeks later by Dr. Nilson) the right side of his face showed the presence of a large number of powder grains embedded in the skin of the cheek, nose, forehead, eyelids and ear. Some powder grains had previously been removed from the eye. During the past year about 190 individual powder grains had been removed by curetting under local anesthesia. About six grains from different parts of the face were removed at each sitting at intervals of a week or two. The skin was broken by a small eye curet, the powder grains picked up with a fine pair of forceps and snipped off with fine scissors. In contrast to the apparent damage done by each curettage, the resulting scars presented an unusually good cosmetic result.

DISCUSSION

DR. FORDYCE said that the method seemed to be good and the result was excellent.

DR. MACKEE inquired in regard to the kind of curet employed. It was difficult to curet normal skin unless the instrument was exceedingly sharp.

DR. HOWARD FOX asked whether any of the members had had any experience in removing powder stains by any other method of treatment, such as injecting papoid, etc.

DR. WINFIELD said that he had had a case many years ago and had tried various methods, but had not tried papoid. He finally employed a small curet, such as is used by the oculist, a small spoon-shaped curet, but he had to keep it very sharp. The result was satisfactory, but not as good as in this case.

DR. KINGSBURY said that the only satisfactory method was the mechanical method, and the result depends on the stage in which the condition is treated. As for papoid, it was worthless. He had had some experience with it years ago, but found it absolutely worthless.

DR. TRIMBLE congratulated Dr. Fox on the good result obtained, and said that he had also used a similar method for a number of years to remove lesions of this kind. He used a small curet, probably the same kind as that spoken of by Dr. Winfield. He desired to recall an interesting history of a patient now under his care who was suffering from a melanoma near the inner canthus of the eye. This patient had stated that sixteen years ago, due to the explosion of a firecracker, he had several small powder stains deeply embedded in the location mentioned. They were allowed to remain and about three months ago he noticed that they were getting larger and taking on a slightly verrucous appearance. He now has what seems to be a melanoma the size of a silver dollar on his temple directly over the powder stains.

LICHEN PLANUS SCLEROSUS ATROPHICUS (HALLOPEAU). LICHEN PLANUS MORPHOEICUS (CROCKER). Presented by Dr. Potter.

A woman, aged 50, apparently in good physical condition, had suffered from the condition presented for two months. There were typical lichen sclerosus lesions, located principally on the neck and shoulders. There was little itching associated with the lesions. An interesting point in connection with the case was that the woman was of a worrisome disposition.

DISCUSSION

Dr. Highman said he was much interested in seeing the violaceous rings which reminded one of the relationship with primary atrophy. It was an unquestionable case of the disease.

Dr. Wise agreed with the diagnosis, and thought it was a pretty example of the disease. It was almost the same as that published in his pioneer work by Ormsby, who also used the name of lichen morphoeicus. If in this case one could demonstrate a single lichen planus lesion, it would strengthen the diagnosis of lichen atrophicus. Without that the diagnosis was not easily made except by microscopic examination. If it were lichen atrophicus, the section would show an infiltration deep in the corium with a broad intervening band of connective tissue; whereas, if it were white spot disease, it would show no deep infiltration, only a condensation of the collagen, as in scleroderma.

Dr. MacKee said it was interesting to see the lesions in the various stages of evolution as well as of involution. There were flat, angular papules, violaceous in color, similar to those of lichen planus. It was the larger lesions that showed the sclerosis. Histologically they were not always distinguishable from scleroderma, for if one saw a papule in a late stage, the infiltration had disappeared and there was simply a sclerosed derma. Unless one obtained a history or a slide of an earlier lesion, it was sometimes difficult to make a differentiation histologically.

Dr. Potter said he had nothing to add to the discussion. He had not considered anything else but lichen sclerosis when he saw the patient. He thought the lesions showed, as had been stated by Dr. MacKee, all the stages of the condition, showing violaceous spots, hypertrophic areas and a few atrophic areas. He would endeavor to obtain a biopsy and report it at the next meeting.

DARIER-ROUSSY SARCOID. Presented by Dr. Williams.

A married Italian woman, 34 years of age, whose general health had been good, had lost 15 or 20 pounds in weight recently. The disease began on the left forearm two and a half years ago as firm subcutaneous nodules, the skin over which later became discolored as if from subcutaneous hemorrhage. There was little change until about five months ago, when fresh lesions appeared on the left arm and both legs. Subjective symptoms were confined to slight pruritus and slight tenderness on pressure. The patient presented lesions in various stages, from firm irregular subcutaneous nodules about an inch in diameter covered with skin showing only a trace of discoloration to dark blue-black, irregularly circular masses of about the same size, located

apparently in the skin itself, with firm elevated borders and a center which was depressed and presented little resistance to the palpating finger. There had been no ulceration, but one lesion on the left leg was covered with a dry crust. Histologic examination confirmed the diagnosis.

DISCUSSION

Dr. Fordyce agreed with the diagnosis. He referred to the not infrequent association of papulonecrotic tuberculid with Bazin's disease, and spoke of a patient he had seen six years previously who then presented typical papulonecrotic tuberculid lesions of the lower extremities. She had recently consulted him again with deep tuberculous ulcers of the leg, together with more superficial lesions which clinically resembled sarcoid.

Dr. Highman declared that it was a remarkable and classic type of the disease. The involuting lesions on the left forearm nicely illustrated the peculiar chocolate brown color described by the discoverer of the disease. The histologic examination was characteristic, and there was no doubt about the diagnosis. Shortly before Boeck's death he published an article on his own type of sarcoid, in which he emphasized the name miliary lupoid as the better term, for he found tubercle bacilli in the lesions, so that if there was any similarity between the Boeck type and the Darier-Roussy type, it was easy to assume the relationship which Dr. Fordyce had brought out.

Dr. MacKee told of two interesting cases seen recently; both had multiple subcutaneous nodules all over the trunk; the underlying skin being adherent but not visually involved; both were diagnosed clinically as sarcoma, but histologically one proved to be sarcoma and the other a Darier-Roussy sarcoid or nodular tuberculosis of the hypoderm, as described by Wende. Clinically, however, the two could not be differentiated. Another patient had in addition to the sarcoid a lupus erythematosus of the face. He had treated a number of patients with Darier-Roussy sarcoid and also with the Boeck type of sarcoid; all had responded to the roentgen-ray treatment; all had required large doses—suberythema doses—and at times one treatment sufficed.

Dr. Highman remarked that the majority of these cases involuted spontaneously, but required some time to do so.

METASTASIS FROM EPITHELIOMA OF TRACHEA. Presented by Dr. Wise.

The trouble of Stephen McM., a man from Dr. Fordyce's clinic, aged 72, first began in the trachea five months previously, and at Bellevue Hospital a diagnosis of epithelioma of the trachea was made. He was there for three weeks, but received no specific treatment. As presented, he exhibited a large fleshy growth, the size of a fist, on the left side of the neck, which was probably a metastasis from a squamous-celled epithelioma of the trachea.

PARAFFINOMA. Presented by Dr. Kingsbury.

The history of this patient was not clear. The patient stated that ten years ago in St. Louis she had some treatment for lines in the face. It was evidently a case of paraffinoma. The case had already been presented at another meeting.

DISCUSSION

DR. MACKEE said that it was his impression that the paraffin was never absorbed, but that it stimulated connective tissue growth. The connective tissue grew all through the mass, separating the paraffin into small foci. This connective tissue stroma made it difficult to remove the paraffin.

DR. HOWARD FOX said that this case reminded him of one he had shown a few years ago in which paraffin was injected by a quack to relieve a slight sinking of the cheek. All went well for some months until the patient tried applications of heat which caused the paraffin to melt and wander about the face with the production of a horrible result, similar to that seen in this patient.

DR. HIGHMAN said the case reminded him of a similar one seen years ago in Paris in which leukemia had been strongly suggested by the purplish lesions.

GUMMA RESEMBLING EPITHELIOMA. Presented by DR. WISE for DR. FORDYCE.

Delia R., 54 years old, born in Ireland, who had been in this country thirty-five years, a widow, showed a characteristic picture of an early tabes. The lesion below the left nostril had been present two months. It was circular, about the size of a dime, raised and infiltrated with ulcerated and rolled edges. There was no adjacent glandular enlargement. The complement fixation test for syphilis was ++++.

The lesions had almost disappeared after two injections of arsphenamin and mercury salicylate.

DISCUSSION

DR. WILLIAMS thought it was an epithelioma.

LESIONS ON THE TONGUE. Presented by DR. WISE for DR. FORDYCE.

Anna B., a girl 10½ years old, for five years had had a lesion or lesions on the tongue, which never disappeared entirely, according to the mother. When the patient first came under observation the lesion was much more marked than as presented; it was then ulcerated and resembled more a leukoplakia or geographical tongue. The mother said the child suffered no pain, but on questioning the child her statements did not quite coincide with that idea.

DISCUSSION

DR. HIGHMAN said that the obvious thing was first to rule out tuberculosis and syphilis. The condition could only be determined by a laboratory study, but it seemed to be traumatic.

DR. TRIMBLE agreed with Dr. Highman that tuberculosis and syphilis should first be ruled out, and that the condition could only be decided by a laboratory study.

DR. WILLIAMS said that the tongue was too large for the size of the jaw, and in his opinion the lesion was caused by the pressure of the long tongue against the teeth. It was purely a chronic traumatism.

DR. WISE agreed with Dr. Williams that the condition was probably caused by the pressure of the tongue against the teeth, and said that he would send the child to the dentist to learn what could be done for her.

EPITHELIOMA FOLLOWING ARSENICAL KERATOSIS. Presented by Dr. Wise.

A man, aged 42, from Dr. Fordyce's service at the Vanderbilt Clinic, had previously been presented. He had had pemphigus twenty years ago, and had then had his photograph taken by Dr. G. H. Fox at the Skin and Cancer Hospital. The assumption was that he had an arsenical keratosis at the sacrum, and it broke down into a squamous celled epithelioma.

DISCUSSION

Dr. MacKee said that as the patient had taken arsenic and presented arsenical keratosis of the palms it was presumed that the epithelioma had evolved from an arsenical keratosis.

Dr. Fordyce said in his opinion Dr. MacKee's conception of the case was correct. He had seen several cases of rather disseminated keratotic lesions in patients who had taken arsenic years previously. In one of these cases multiple epithelioma had developed at the sites of the keratosis. The statement of Hutchinson, that arsenic can cause keratoses which undergo malignant change has been repeatedly confirmed by subsequent observation.

Dr. Trimble said he agreed with everything said about the case except the assumption. It seemed hardly possible that a keratosis of the extent exhibited on this patient could arise from only six weeks of arsenical treatment. Perhaps the man's history was not absolutely accurate; he may have had some prescription containing arsenic without knowing its contents.

Dr. Wise said he should have demonstrated the keratosis on the soles and palms, where they were clearly of arsenical character. The diagnosis of arsenical keratosis of the palms had been made before the patient told them about the sacral lesion. Furthermore, there were two or three keratotic lesions in the lumbar region; in addition, he gave a history of arsenical keratosis preceding this, though he did not know it was a keratosis. The history of the short administration of the arsenic was remarkable, but the patient was an intelligent man and said he took Fowler's solution for his pemphigus. Another remarkable thing was that a man who had pemphigus twenty years ago should still be alive and well.

SYMMETRICAL PIGMENTED NEVUS OF THE AXILLAE. Presented by Dr. Fox.

L. G., a woman, aged 36, married, born in Russia, had come to the clinic for relief from a pityriasis rosea. On the middle of the extensor aspect of the right arm was a dark brownish, thickened, pigmented and hairy mole, about 4½ inches in length. In both axillae were symmetrical, almost perfectly circular, sharply bordered, brownish, pigmented, smooth lesions. The axillary hair was sparse. The nevi in the axillae were less elevated and thickened, and not as dark in color as the nevus on the arm. The patient thought the lesions in the axillae became lighter in summer, but said they never disappeared, and had been present since birth. The axillary lesions suggested at first glance an acanthosis nigricans. As the lesions were sharply confined to the axillae and had been present unchanged since birth, as there were no lesions of the mucous membranes or evidences of internal malignancy, the possibility of an acanthosis nigricans could not be properly entertained.

DISCUSSION

DR. WILLIAMS said that it was an interesting case, showing another freak in nevi, but after having seen a few thousand men in the army go through the bathroom he had reached the conclusion that there was no limit to the manifestations of nevus. He had not before had any conception that they could be so various.

MINNESOTA DERMATOLOGICAL SOCIETY

Regular Meeting, May 5, 1920

S. E. SWEITZER, M.D., *President*

PITYRIASIS LICHENOIDES CHRONICA. Presented by DR. FREEMAN.

A woman, aged 28, married, the mother of two healthy children, had had a generalized eruption for twenty-one years. Practically the entire body, except the face and hands, was involved. The eruption was brownish red in color. There were many pityriasis rosea-like patches and lichenoid papules. Itching and other subjective symptoms were entirely absent.

PITYRIASIS ROSEA RESEMBLING SYPHILIS. Presented by DR. SWEITZER.

A young man presented a macular eruption over the body that in color bore a striking resemblance to the early eruption of syphilis.

DISCUSSION

DR. WRIGHT called attention to the presence of the eruption on the neck. He stated that the early, ungrouped syphilitic eruption is practically never seen on the neck. He had seen only one patient with the syphilitic roseola on the neck.

DR. BUTLER stated that it is impossible to scrape off the scale in pityriasis rosea. Papular syphilids show a definite infiltration.

GRANULOMA PYOGENICUM. Presented by DR. ARMSTRONG.

A man, aged 26, about six months ago showed a typical granuloma pyogenicum on the pubes. At that time it was cut off and the base cauterized, but recurred and at the time of presentation was nearly an inch in length, resembling a cutaneous horn.

DERMATITIS EXFOLIATIVA. Presented by DR. MICHELSON.

A man, aged 64, noticed last fall a red spot on his scalp. Scaling and itching were rather pronounced. The lesions did not become moist. In February the disease extended widely, involving the hands and genitocrural region. At the time of presentation the patient showed a generalized scaling eruption on the scalp, body and limbs. He complained of itching and burning. The general health was excellent. Urine examination was negative. Leukocyte count was 9,600 with 79 per cent. polymorphonuclears, 15 per cent. lymphocytes, 3

per cent. large mononuclears, 1 per cent. transitionals and 2 per cent. basophils. Hemoglobin was 94 per cent. The basal metabolism was normal. Blood chemistry showed blood sugar 0.115 per cent., creatin 2.51 mg., urea nitrogen 15.4, uric acid 7.1, and alkali reserve 6.5.

The microscopic section showed little change that was indicative. There was some hyalinization of the papillae and no lymphocytic infiltration.

DISCUSSION

Dr. Freeman thought the case was one of pityriasis rubra pilaris (Devergie).

Dr. Irvine called attention to the absence of branny desquamation and follicular involvement as seen in Devergie's disease.

Dr. Wright disagreed with the diagnosis of pityriasis rubra pilaris. The follicular lesions in pityriasis rubra pilaris are dirty yellow or grayish in color and not red.

Dr. Butler stated that this was a typical example of pityriasis rubra pilaris, and called attention to the follicular involvement on the hands and body.

Dr. Olson stated that he failed to see any follicular involvement on the hands, and thought the apparent follicular involvement on the body was cutis anserina, due to the fact that the patient felt cold.

HYDROA VACCINIFORME. Presented by Dr. Michelson.

A boy, aged 12, showed a disorder of eight years' duration, limited to the face and hands. No other member of his family had similar lesions. At the time of presentation there were numerous white scars on the face and hands. There were vesicles on the backs of the hands and on the ears. The backs of the hands showed extensive atrophy resembling senile atrophy. Freckles were present but no verrucous lesions or telangiectases. Blood examination showed a slight leukocytosis. The Wassermann reaction was negative.

The question of xeroderma pigmentosum was brought up, but the consensus of opinion was that this disease was ruled out by the absence of telangiectases, keratoses and photophobia.

SYPHILIS RESEMBLING SYCOSIS. Presented by Dr. Sweitzer.

The eruption in this patient, a man, aged 32, was papulopustular in character and limited to the beard. He had been treated for three years for sycosis by a number of doctors.

Book Review

THE TREATMENT OF SYPHILIS. H. Sheridan Baketel, A.M., M.D., New York, The Macmillan Company, 1920.

Baketel has compiled a volume for physicians who have not heretofore employed the intravenous method of injection in syphilis or those whose acquaintance therewith is limited. He uses extracts and abstracts of many excellent articles presented during the last decade, some chapters of the book being almost entirely so constituted. The chapters on the history and chemistry of arsphenamin comprise about fifteen pages and are rather technical. The charts are similar to, if not the same, as those used in advertising one brand of arsphenamin. Incidentally, one looks in vain under the heading of authorities quoted for Schamberg and his co-workers at the Dermatological Research Laboratories, whose contributions to American chemotherapy of arsphenamin could certainly not have been forgotten.

The use of various forms and preparations of mercury and iodids is mentioned, and there is a brief consideration of the pros and cons of intraspinal therapy as advanced by the leaders in this special field. Short chapters on the cure of syphilis, syphilitic reinfection and when a syphilitic may marry, close this volume.

The book has a distinct commercial flavor; it gives an incomplete presentation of the subject it purports to consider, and is not to be recommended. It is the sort of book on which one looks for a manufacturer's imprint.

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